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Scottish Birds is the quarterly journal for SOC members, and is published in March, June, September and December annually.

Containing original papers relating to ornithology in Scotland, topical articles, bird observations, reports of rare and scarce bird sightings, alongside branch and Club-related news, our members tell us that *Scottish Birds* is one of the key benefits of belonging to the SOC. Its different sections have been developed to meet the wide needs of the birdwatching community, and the publication is renowned for its first-class photography.

An archive of the journal is available on the SOC website, where links can be found to other Club publications including the *Scottish Bird Report* online.

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On the one hand, a birdwatching club. Established in 1936, the Scottish Ornithologists' Club (SOC) is Scotland's bird club with 15 branches around the country and a growing membership of over 3,000. Through a programme of talks, outings, conferences and other events, it brings together like-minded individuals with a passion for birds, nature and conservation.

On the other, a network of volunteers across Scotland, gathering vital, impartial information about our wild birds. The data we collect is made available to conservationists, planners and developers, and is used by organisations such as the RSPB, as one of the first points of reference in informed conservation planning.

Club Headquarters can be found at Waterston House, Aberlady, overlooking the scenic local nature reserve. Housed within, is the George Waterston Library, the largest ornithological library in Scotland, and the Donald Watson Gallery - one of the jewels in the Waterston House crown, exhibiting wildlife art all year-round.

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As well as receiving *Scottish Birds* every quarter, SOC members have access to a programme of talks and outings across Scotland and affiliation to a local branch of the Club. New members will receive a welcome pack on joining, plus a thank you gift if paying their subscription by direct debit.

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President's Foreword

Plate 172. James Main, Aberlady Bay, July 2018. © *Doreen Main*

The past few months have been busy ones. There have been a number of meetings of the Strategy Group and I am pleased to report that considerable progress has been made to ensure that the Club is in good shape for the future. We are proposing, subject to agreement by the Annual General Meeting, that the role of President be split, giving the President a more ambassadorial role and that two Vice Presidents be appointed, one with responsibility for Management and Infrastructure and one with responsibility for Birding and Science. The Strategy Group will have a further meeting ahead of the AGM.

In July the fifth successful Young Birdwatchers' Training Course took place on the Isle of May organised by the Club in conjunction with the Isle of May Bird Observatory. As in previous years six keen youngsters stayed on the island for a week learning ringing, recording and other skills. The course was led by Stuart Rivers and Mark Oksien and assisted by Alison Creamer with support from CEH and SNH.

I should like to remind you all that the SOC Annual Conference will be held at the MacDonald Aviemore Highland Resort on 26-28 October. The theme is "Birds in a Human Landscape". There is a varied programme with many excellent speakers on a variety of related topics. A detailed programme is on the website. There may be places left and, if you haven't booked already, give Kathryn Cox at Waterston House a call. I do look forward to seeing as many of you there as possible.

More recently a conference was held at Stirling University for Scottish Bird Recorders. Representatives travelled from far and wide to attend the conference and it was a most useful and thought provoking day, organised and chaired by Stuart Rivers in a most effective manner. The venue was excellent providing good accommodation and food. It had been some considerable time since a previous Recorders' Conference had been held and it was agreed this should become a biennial event. A full report will appear in a future issue of *Scottish Birds*.

With the migration season coming up I hope you all have a good autumn's birding.

James Main, SOC President.

Plate 173. Main Hen Harrier roost area Deeside, North-east Scotland at sunset December 1998. Trees are regenerating Scots Pine, dark brown is Ling Heather and light brown and cream are dead bracken and grasses respectively. Adult male Hen Harrier at bottom right and ringtail harrier at centre right. © *Ian Rendall*

Numbers and behaviour of Hen Harriers at, and structure of, a communal roost in North-east Scotland over 28 winters

G.W. REBECCA

A communal ground roost of Hen Harriers on dry moorland was regularly monitored over 28 winters (1989/90 to 2016/17) covering 137 months, resulting in 524 harrier records. Numbers were highest in the first winter with a monthly average of 12 harriers. They then fluctuated over the first half of the study period, before declining steadily to zero in winter 2009/10. Numbers did not recover and the roost lost its communal status in the last five winters of the study. Disturbance, grazing pressure, habitat change and catchment land-use were not thought to have influenced the decline and lack of prey availability was considered unlikely. Regional breeding status mirrored the decline and was probably the main reason for the roost's demise. The vegetation structure at the roosting places was measured and assessed for cover - all were in Ling Heather at depths ranging from 51–86 cm and most were open overhead. The roosting behaviour of the harriers, and behaviour of other raptors visiting the roost areas in the presence of harriers is detailed. Merlin and Black Grouse co-roosted amongst the harriers and this behaviour is discussed.

Background and introduction

Including the Hen Harrier *Circus cyaneus*, at least six of the ten harrier species worldwide are known to roost communally outside the breeding season (Watson 1977). The birds usually roost on the ground and often in wet-marshy-shrub habitats (Watson 1977, Clarke & Watson 1990) but roosts can also be in dry sites. For example, in 1997 large numbers of Pallid Harriers *C. macrourus*

and Montagu's Harriers *C. pygargus* (>2,500 counted and possibly over 3,000 in total) roosted communally in dry grassland in north-west India (Clarke *et al.* 1998). This count topped two previous counts of around 1,000 Montagu's Harriers in Senegal and 1,000 Northern Harriers *C. hudsonius* at Oklahoma USA (Cormier & Baillon 1991, McCurdy *et al.* 1995). In Britain, Hen Harrier communal winter roosts are much smaller, with many in single figures and only a few with around 20–30 birds (Clarke & Watson 1990).

Atypically, Hen Harriers have recently been recorded roosting in trees in winter in Northern Ireland, with this unusual behaviour believed to be due to a lack of suitable ground sites and to avoid ground predators such as Red Fox *Vulpes vulpes* (Scott & Clarke 1994, Scott 2010). The norm however, for Hen Harriers in Britain, Ireland and the Isle of Man outside the breeding period, is ground roosting and often reported from bogs, marsh and wet-fen type habitats (e.g. Watson 1977, Cullen 1990, Scott 2010). Some winter roosts in Britain are considered vulnerable - with draining, burning and disturbance by humans some of the threats and at worst, shooting has occurred (Clarke & Watson 1990, Orr-Ewing 2004, Carrell 2007) resulting in roost locations often being guarded. However, some have been described, mainly from south-east England, and often from safe or protected areas (e.g. Turner 1978, Everett 1979, Howells 1986, Hadrill 1987).

In Scotland, few Hen Harrier winter roosts have been documented, probably because of perceived threats. Mitchell *et al.* (1980) described a wet reed-bed roost from Argyll in 1978 holding up to 18 harriers, and Watson and Dickson (1972) presented a meticulous report from their observations at four roosts in Galloway from 1966–72, recording combined totals of up to 60 harriers; and then updated to 1975/76, recording a maximum of 30 at the main roost (Watson 1977). Marquiss (1980) summarised the Galloway data and that from a further five roosts from the 1970s - a

Plate 174. Main Hen Harrier roost area Deeside, North-east Scotland November 2017. Light brown, light green and cream areas are dead bracken and grasses. Harriers used these areas as pre-roosting resting and preening sites. © *Graham Rebecca*

coastal site in Dumfriesshire with up to seven harriers, another roost from Argyll also with a maximum of 18 harriers and three upland roosts from North-east Scotland holding a combined maximum of 11 harriers. For Orkney mainland, Picozzi & Cuthbert (1982) reported maximum monthly counts of 14–21 Hen Harriers from a wet reed-bed roost during 1975–81.

British ornithologists have attempted to monitor specific Hen Harrier winter roosts monthly, between October and March since 1983/84, as part of a co-ordinated scheme (Clarke & Watson 1990, 1997). Further, since 2015 an RSPB-led EU LIFE + Hen Harrier project has included winter roost monitoring in Scotland (Stewart 2017). In this paper, I report on the regular counts during the winters of 1989/90 to 2016/17 from a moorland Hen Harrier roost in North-east Scotland that held no standing water (Plates 173–175). Aspects of the vegetation structure at the roosting places (traditionally called 'forms', Watson 1977), potential disturbance by humans and grazing pressure from deer (Red Deer *Cervus elaphus* and Roe Deer *Capreolus capreolus* combined) are also presented. The behaviour of the harriers and other raptors frequenting the vicinity of the roost and presence of other birds was recorded.

Study site and methods

The main roost area is situated in a glen on Deeside, North-east Scotland covering an area of about 1.5 km x 0.5 km, with a central altitude of around 300 m. A secondary roost area is about 1–1.5 km away on the opposite side of the glen. The glen is typical of the general area and is sparsely populated with mixed land-uses ranging from commercial forestry, native pinewood establishment, hill-farming, outdoor recreation and moorland managed for the sport shooting of Red Grouse *Lagopus lagopus,* Red Deer and Roe Deer. There was no major habitat change at the main roost area or nearby during the study period and other than firebreaks, no cutting of vegetation, planned burning or draining occurred.

Counts were done from various vantage points (VPs, e.g. Plates 173 & 174) and usually began around two hours before the anticipated sunset. Distances from the VPs to the general roost areas ranged between 300 m and 700 m, but could have been shorter or longer depending where the birds eventually settled. In the early years, a second observer was often present and on occasions a third, fourth or fifth person. When the secondary roost area was in use a minimum of two people were involved and numbers from both areas were combined. In later years, watches were done on my own, or occasionally by another observer. Some counts were abandoned if the weather deteriorated enough to make accurate counting difficult. To assess morning counts, a number of watches began pre-dawn, either on the same day as an evening watch or 1–2 days after, but proved unsatisfactory and were curtailed.

The harriers often flew back out more than once after apparently 'going-to-roost' (see also Watson 1977 and Scott 2010). Ensuring that double or triple counting was not recorded was easier if more than one observer was present. When birds were flighty and slow to settle and there was only one observer, a minimum count had to be judged. Feather colour enabled females and first-year males to be recorded as 'brown ringtails' and adult males as 'grey' (Watson 1977, Plates 173, 176 & 177).

In the early winters of 1989/90 to 1993/94, watches were aimed to match dates for the nationally co-ordinated counts. After that, they were done opportunistically with regard to access, weather, observer availability and local deer stalking. Some months had multiple visits (up to four) with the maximum count used here, and some months had no visits or an abandoned count. For the vast majority of watches, potential disturbance by humans was assessed by noting any seen in the vicinity. Likewise, to assess grazing pressure counts of Red Deer and Roe Deer were recorded. This allowed temporal comparison over similar watch durations. Other raptors seen were observed until they left the area or were lost from sight and behaviour noted if at least one Hen Harrier was in the general area. Other interesting or novel bird events were recorded.

Plate 175. Main Hen Harrier roost area Deeside, North-east Scotland November 2017. Foreground - typical roosting-site form in mature and degenerate Ling Heather. Background - light brown and cream areas are dead bracken and grasses, used by harriers as pre-roosting resting and preening sites. © *Graham Rebecca*

Actual roost visits, to locate forms and assess and measure vegetation structure (and to collect pellets for further study) were carried out either side of mid-day to avoid any disturbance to harriers that may have arrived early. The depth of vegetation at forms was measured to the nearest cm (from ground to end of shoot) and the form assessed as open, intermediate or well-hidden with regard to overhead cover. The dominant shrubs and presence of other flora was recorded for a 1 m radius from the form centre. To ensure a form was only described once, a small piece of string was tied to the bottom of a shrub 3 m to the north of the form and left hidden.

Results

Coverage and counts

In total, 204 visits were made over 137 months resulting in 524 Hen Harrier records comprising cumulative monthly totals of 79, 94, 86, 85, 101 and 79 for October to March respectively (Figure 1). The average numbers, from maximum monthly counts of 4–6 per winter, are shown in Table 1. There was an average of 6.8 harriers per month for the first nine winters of study, 4.7 for the next nine winters and 0.24 for the last ten. The best winter was in 1989/90 with an average of 12 and maximum of 16 harriers. Numbers gradually decreased to around 4–5 per month in 1994/95 to 1997/98. They rose to around 7–8 per month in 1998/99 to 2000/01, then decreased again to around 2–3 per month in 2003/04 to 2006/07. In the last 10 winters only one or two harriers were seen occasionally, with none recorded for the winters of 2009/10, 2012/13, 2013/14 and 2015/16, and by the 2012/13 winter the roost had lost its communal status (Table 1, Figure 2). Throughout the study period, brown ringtails were dominant, with adult grey males seen in only half of the years and usually only one or two per winter, with four and three respectively for winters 1990/91 and 1991/92 (Table 1).

Table 1. The maximum and average number of Hen Harriers from 137 maximum monthly counts, and average number of people and deer (Red and Roe combined) from 133 monthly counts at a communal winter roost in North-east Scotland from 1989/90 to 2016/17.

Winter	Number of months	Average number of Hen Harriers (range)	Maximum number of brown ringtails	grey males	Average number of people	deer
1989/90	4	12 (9–16)	16	1	-	21
1990/91	6	9.1 (6–12)	11	4	-	1
1991/92	4	9.5 (6–11)	8	3	0.5	2
1992/93	5	5.2 (4–6)	6	2	-	1
1993/94	4	6 (4–10)	9	1	0.25	1.5
1994/95	6	4.1 (2–8)	6	2	0.33	1.6
1995/96	6	5.3 (3–11)	9	2	-	2.8
1996/97	5	5 (3–7)	6	2	-	3.8
1997/98	6	5.1 (4–7)	7	-	0.2	4.3
1998/99	6	7.8 (7–8)	8	2	-	5.1
1999/00	5	8 (6–10)	10	1	0.2	5.8
2000/01	6	6.8 (5–10)	9	1	-	3.9
2001/02	5	4.8 (4–6)	6	-	0.2	4
2002/03	4	4.5 (4–5)	5	-	-	1.7
2003/04	5	2.4 (1–3)	3	1	-	2.2
2004/05	4	3 (2–4)	4	1	-	1.5
2005/06	4	3.5 (3–4)	4	1	0.5	2.5
2006/07	5	2 (0–3)	3	-	-	1.4
2007/08	4	0.5 (0–2)	2	-	1.25	1.2
2008/09	4	0.7 (0–2)	2	-	-	1.2
2009/10	5	-	-	-	0.6	5
2010/11	5	0.4 (0–2)	2	-	-	1.4
2011/12	5	0.4 (0–2)	2	-	0.4	0.4
2012/13	5	-	-	-	-	2.4
2013/14	4	-	-	-	-	1.5
2014/15	5	0.2 (0–1)	1	-	0.4	0.6
2015/16	5	-	-	-	-	0.5
2016/17	5	0.2 (0–1)	1	-	0.2	0.6

Roosting forms

Twenty-five roosting forms were located at the main roost area up to winter 1996/97. All had fresh excreta and most had a few pellets and occasionally moulted harrier feathers (some also had piles of grouse droppings, see later). All were in mature or degenerate Ling Heather *Calluna vulgaris* with small amounts of Bilberry *Vaccinium myrtillus* or Cowberry *V. vitis-idaea* or a mix of both, at an average depth of 71 cm (range 51–86 cm, Figure 3, Plate 175). The ground cover at the forms consisted of 14 with moss bases, 10 with moss-grass bases and one with grass only. In terms of overhead cover, 21 forms were classed as open, three as partially hidden and one as hidden.

Roosting behaviour

The harriers arrived singly, or in small groups of up to four. The first birds arrived at the roost areas up to two hours from the anticipated sunset, but most arrived within the last hour. Occasionally birds would arrive after sunset and go direct to roost. The early birds however either flew around a lot, intermingling up to 1 km away and then back-and-forth, or sat perched in open pre-roosting areas. These were on grassy or dead bracken patches, hummocks, posts or old stone shooting butts, where they rested and preened (Plates 173–175). When at these pre-roosting areas or perches they were relatively easy to count, as when some flew and re-settled often following mobbing from crows or other raptors (see later). Most appeared to roost singly, often after usurping another harrier or being usurped before finally settling, but on two occasions two ringtails roosted in the same form.

Hen Harriers at, and structure of, a communal roost in North-east Scotland over 28 winters

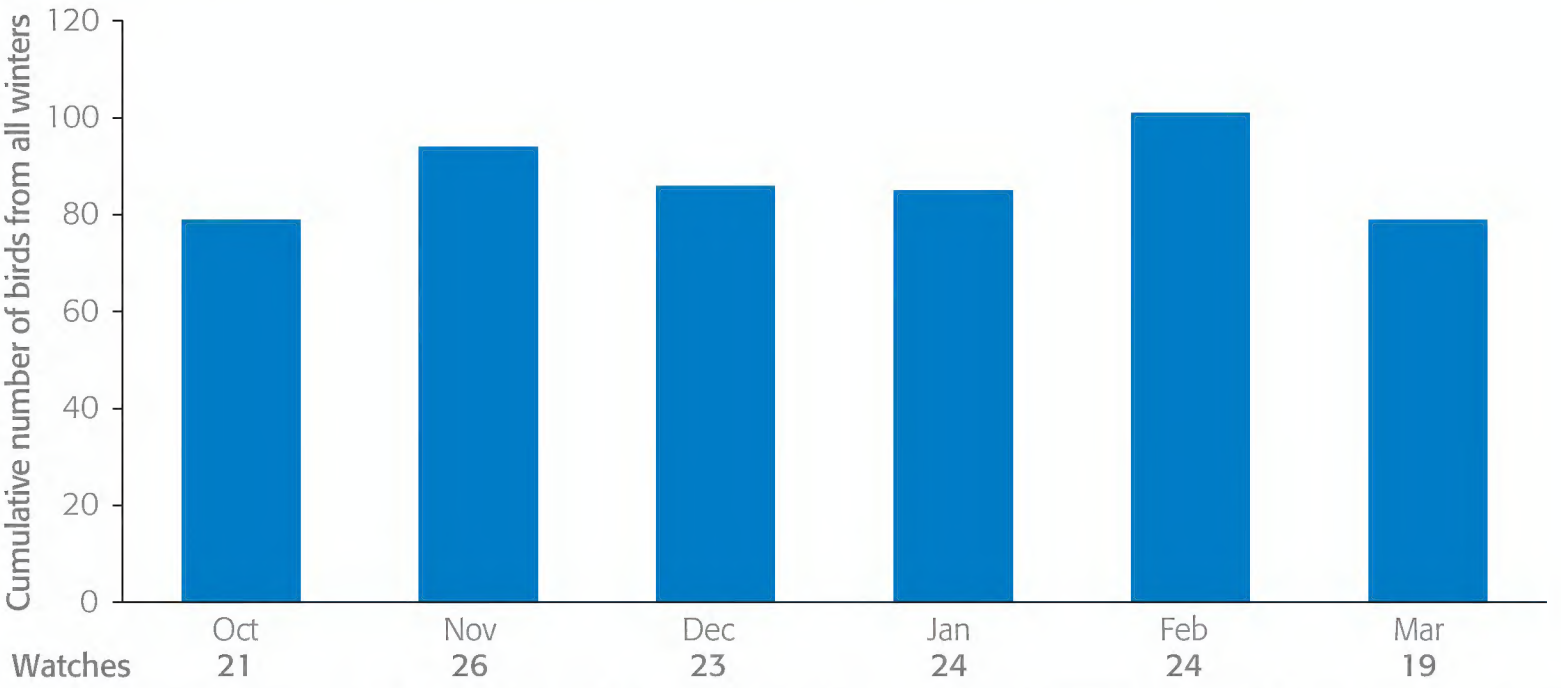

Figure 1. Cumulative monthly totals from 137 watches at a communal winter Hen Harrier roost in North-east Scotland during 1989/90 to 2016/17.

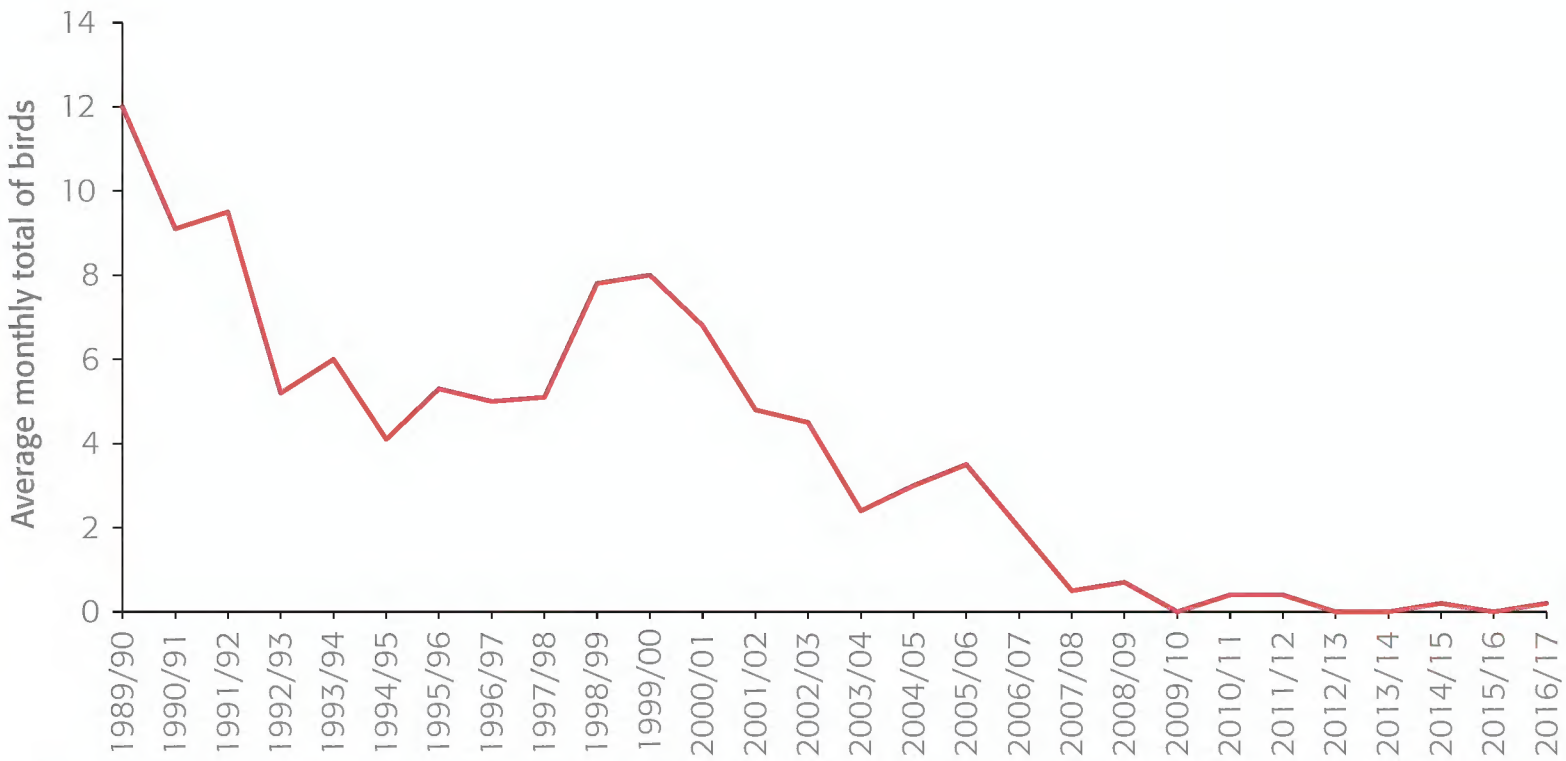

Figure 2. Average number of Hen Harriers from maximum monthly counts at a communal winter roost in North-east Scotland in 1989/90 to 2016/17.

The roosting or pre-roosting loafing birds were occasionally disrupted by other natural and unnatural events. For example, on 27 December 1991 near sunset a Red Fox was at the main roost area (the only one seen during the study and no scats were found at the forms) and at least three harriers were disturbed and flying. They flew around and would not settle, continuing to alarm call, eventually moving further afield until it was not possible to see where they roosted. A January 1992 visit was not done, but at the February and March watches 10 and 11 harriers were back roosting at the usual areas. In addition, on 9 December 2000 a helicopter flew very low over the main roost area and all seven ringtails were disturbed, flying off in all directions - only three came back to roost at the usual area that night.

Extreme weather conditions also affected roosting behaviour. For example, on 15 February 1998 there was a gale-force wind and all the harriers were very slow to settle, eventually roosting much lower downhill in sheltered areas. At the March visit, with calm conditions, they roosted back at the usual area. Further, following recent snow, at least 20 cm covered the roost area forms on 30

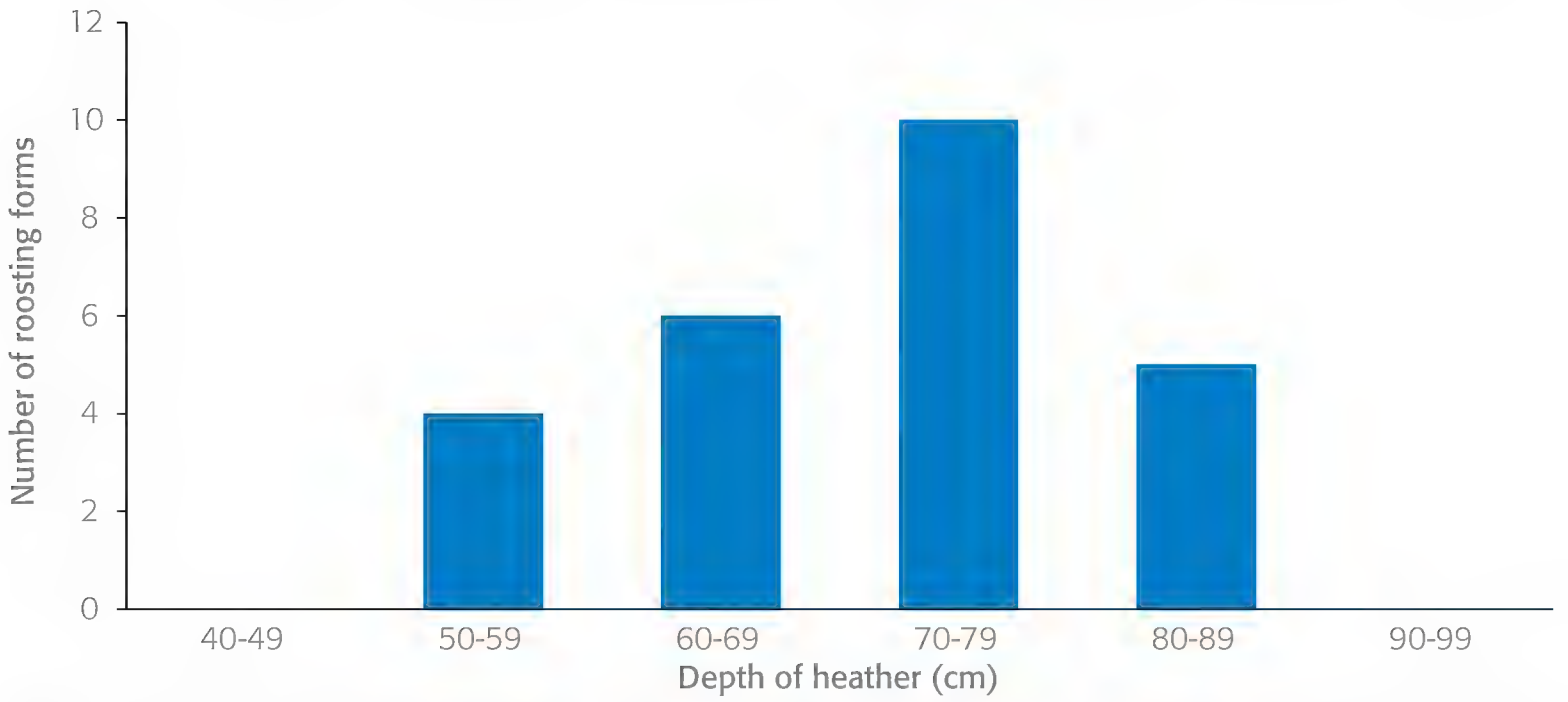

Figure 3. Depth of Ling Heather at 25 Hen Harrier roosting forms at a communal winter roost in North-east Scotland during 1989/90 to 1996/97.

December 2000. The harriers found it difficult to settle and kept coming back out or sitting on the heather at the edge of forms. Eventually, as it got darker, they plunged into the snow-filled forms. On 9 January 2001, the roost was still covered in snow, with forms full of drift snow, and at least six ringtails were present. None roosted in the usual area and were last seen milling around young trees nearby, where they presumably found other roosting sites. By the next visit on 24 January the snow had cleared and at least six ringtails roosted back at the usual area.

Potential disturbance and grazing pressure

For 133 months (97%) the presence of humans and deer were counted and are used to indicate possible disturbance and grazing pressure on the habitat. Winter averages for both subjects are shown in Table 1. In winter 1989/90, a large herd of Red Deer was present throughout January and February. On 18 February, 43 of them were resting very close to the main roost area forms, but the harriers just flew around and over them and settled without any apparent concern. Apart from winter 1989/90 deer were low in numbers, averaging 0.4 to 5.8 per month per winter and there appeared little pressure on the structure of the roost areas from grazing.

Plate 176. Female Hen Harrier in flight. © *Andy Hay/RSPB images*

There were many fewer people than deer and for 16 winters none were seen (Table 1). Average numbers for the other winters ranged between 0.2 and 1.25 per month. When people were seen, they were nearly always on the periphery of the main roost area and none were seen near the secondary roost area. Only twice did people (dog walkers) venture close to the roost area forms. No harriers were present in the first instance, but at the second, a free-running dog disturbed two Roe Deer that put up at least six of the nine roosting ringtails. Due to topography and failing light, the dog-owner was unaware of the disturbance and the harriers were re-settled within 10 minutes. Essentially, the roost areas were generally undisturbed by humans.

Other raptors

Raptors often visited the roost areas during times when at least one harrier was present, with 79 occurrences from seven species (Table 2). Including the Hen Harrier; all were local breeders and as such were probably residents. Buzzard *Buteo buteo* was the most numerous with 37 occurrences, followed by Merlin *Falco columbarius* with 12 occurrences, then Kestrel *F. tinnunculus* and Golden Eagle *Aquila chrysaetos* each nine occurrences and Peregrine *F. peregrinus* seven occurrences, with the *Accipiters* rarely recorded. Interactions such as mobbing and/or alarm calling occurred in 25% of harrier-raptor occurrences. Seven of these were initiated by a raptor (three by Peregrine and two each by Buzzard and female Sparrowhawk *Accipiter nisus*) and 13 by the Hen Harriers with some spectacular. For example, on 18 February 1990 an adult Golden Eagle arrived at the main roost area at sunset and was immediately mobbed by three ringtails and within a minute, seven ringtails were in the air mobbing and alarm calling at the eagle. This continued for a full five minutes before the eagle drifted off and the harriers stopped alarm calling and returned to the roost area. Further, on 22 January 2004 three ringtails mobbed five Buzzards, with all eight birds mobbing and alarm calling until the Buzzards moved off and the harriers then re-settled.

A female Goshawk *A. gentilis* mobbed an adult Golden Eagle high over the main roost area on 5 March 2001, but there was no harrier response and this may have been territorial defence by the Goshawk. A harrier occasionally passed a perched Merlin as close as 20 m, with no apparent concern shown by either species. Merlins were seen to roost among the harrier forms at the main roost area on seven occasions, with the other five Merlins last seen near there at dusk and presumed to have roosted nearby.

Other birds

At dusk on 27 December 1998, a Short-eared Owl *Asio flammeus* (the only one seen during the study) was constantly mobbed by three ringtails that had previously been settled. These birds disappeared into the gloom and it was not possible to record the outcome. Around 20–30 Carrion Crows *Corvus corone* regularly flew over and close to the main harrier roost area before

Table 2. The occurrence and behaviour of other raptors and Hen Harriers at a communal winter roost in North-east Scotland during 1989/90 to 2016/17.

Species	Number of occurrences	No reaction or interactions with Hen Harriers	Raptor initiated mobbing or interaction with Hen Harrier	One or two Hen Harriers mobbing or alarming at raptor	At least three Hen Harriers mobbing or alarming at raptor	Roosted near Hen Harriers
Golden Eagle	9	6 *	-	1	2	-
Buzzard	37	27	2	1	7	-
Goshawk	1	1 *	-	-	-	-
Sparrowhawk	4	2	2	-	-	-
Peregrine	7	3	3	1	-	-
Kestrel	9	8	-	1	-	-
Merlin	12	12	-	-	-	7 **

* Goshawk mobbed Golden Eagle ** probably another five occurrences (see text)

Plate 177. Male Hen Harrier. © *Andy Hay/RSPB images*

roosting in trees about 1 km away. Crow-harrier interactions were relatively common but two are worthy of further mention. On 17 March 1991, three ringtails were mobbed intermittently by five crows for fully 20 minutes until the harriers moved away to the secondary roost area. Ironically, the crows then moved off towards the tree roost in the opposite direction. On 4 October 1992, up to five crows mobbed a ringtail for four minutes before the ringtail dived into the heather and stayed settled.

Piles of fresh grouse droppings were often found in the roosting forms and sometimes alongside recent harrier occupancy signs (excreta, pellets, feathers). Red Grouse and Black Grouse *Tetrao tetrix* were relatively common breeders in the glen with display leks of the latter near both roost areas. Red Grouse were rarely seen or heard *en route* to the VPs, during watches or during form checks. In contrast, Black Grouse were regularly seen, either feeding on Scots Pine *Pinus sylvestris* or birch *Betula sp.* or flushed from heather.

Surprisingly, some Black Grouse were seen to fly direct to the main harrier roost area and roost there. The following events highlight the main evidence for this behaviour. 1) Around 15:15 hrs on 11 November 1989, a total of 22 male and 12 female Black Grouse went to roost 'among the harriers'. 2) At 15:30 hrs on 3 January 1990, 18 male Black Grouse flew to the roost area and went straight in, with some about 20 m from an occupied harrier form. 3) Around 19:45 hrs on 9 September 1990, a total of 22 male Black Grouse flew into the main roost area. 4) At 15:35 hrs on 7 February 1992, eight male Black Grouse were seen to roost on the ground near trees at the edge of the main roost area (the same area where harriers went on 9 January 2001, see earlier *roosting behaviour)*. 5) Around 18:10 hrs on 27 October 1996, a total of 19 male and nine female Black Grouse went to roost 'among the harriers'. 6) At 15:55 hrs on 17 November 1996, eight male Black Grouse went to roost 'among the harriers'.

These events all occurred near or just after sunset, and the grouse arrived quickly and glided into the heather without any stalling. Although visibility was not ideal there was no obvious movement or flying back out from the Black Grouse. The observations were that they roosted close to the harriers on these dates. In addition, at around 15:30 hrs on 8 December 2002, H. Maggs and A. Perkins counted 22 male Black Grouse flying towards the main harrier roost area, where three ringtails had been seen earlier. Further evidence to support this behaviour came during two pre-dawn watches. First, at 06:10 hrs on 18 March 1990 (sunrise around 06:00 hrs), 11 male Black Grouse were seen on the ground near the main harrier roost area. Second, at 08:40 hrs on 1 December 1996 (sunrise around 08:25 hrs), three male Black Grouse were seen on the ground at the main harrier roost area. For both events, the Black Grouse were not seen to fly in and must have spent the night at, or in close proximity to, the main harrier roost area.

Discussion

In Britain, Hen Harriers have a long history of being persecuted by humans (e.g. Watson 1977, Holloway 1996, Etheridge *et al.* 1997, Thirgood & Redpath 2008, Thompson *et al.* 2009). This usually involves breeding season interferences, but can also be in the non-breeding period (Thomson 2017). Illegal persecution this century is believed to be the main reason for the Hen Harrier's poor current status on mainland Britain (e.g. Redpath *et al.* 2010, Hayhow *et al.* 2013, Wotton *et al.* 2018). As a result, breeding studies and winter roost monitoring in certain areas have to be conducted discreetly and in confidence.

Against this background and following the main roost area being identified in November 1989, it was decided to monitor this roost. For the first 12 winters maximum numbers were relatively high, but gradually declined to zero or one over the last five winters. The study ended up being a record of the demise of an important Hen Harrier roost of Scottish significance (Clarke & Watson 1990). What happened? There are a number of possible explanations for the decline.

A reduction of potential roosting habitat did not happen, and there was more scrub habitat, and hence suitable roosting area, by the end of the study period (Plates 174 & 175). Land use in the glen and surroundings changed little, with the main difference between the study period start and finish being the localised regeneration of scattered native pinewood, which probably enhanced the suitability of the general area for roosting Hen Harriers.

Levels of disturbance were low throughout the study. Most roost watches for the first half of the study period were on weekends, creating possible bias. However, in the second half of the study period many visits were in midweek. Further, there was no other evidence of disturbance by humans and no suspicion that anything untoward occurred at the roost areas during the study winters.

There was no evidence of any serious declines in potential avian or small mammal harrier prey in North-east Scotland during the study period and prey shortage seems unlikely. However, pellet analysis to determine local winter diet and current counts of such prey would be necessary to validate this assertion.

Five other Hen Harrier winter roosts were known from upland North-east Scotland. Three of these were monitored in the early 1970s and held a combined average of 5.5 harriers (Marquiss 1980) and two, holding 1–3 harriers, were monitored by myself in the mid-1980s as part of the co-ordinated British counts (Clarke & Watson 1990). All were checked a number of times during this study but were not occupied. There is a good regional network of field observers in North-east Scotland and requests for Hen Harrier sightings were made to local SOC and RSPB members groups, Grampian Ringing Group and the North-east Scotland Raptor Study Group (NESRSG). Some members of the latter actively searched for Hen Harrier winter roosts. For example, vast

areas of suitable habitat in North-east Scotland was surveyed for harrier presence over winters 2009/10, 2010/11 and 2011/12 using a combination of VP watches and walking tracks. A total of eight, 12 and nine harriers were observed following 202, 228 and 239 hours of survey respectively for the three winters, with two previously unknown roosts of 2–3 harriers located (Craib 2012). In addition, another roost with 2–3 ringtails was located on upper Deeside over winters 2013/14 and 2014/15 (S. Rao pers. comm.). Few other potential roosts were forthcoming from the ornithological network plus many Environmental Assessments for potential wind farms, and it is unlikely that any large communal Hen Harrier roost remains undetected.

Since the NESRSG was formed in 1981 breeding Hen Harriers have been monitored, incorporating five national surveys where coverage was thorough (Figure 4). Numbers peaked in the 1990s at around 30 breeding pairs, but by 2014 had decreased to one pair (Rebecca *et al.* 2016). In 2015–17, numbers improved to 8–10 breeding pairs (NESRSG & RSPB unpublished, Figure 4). The raptor study group area covers Aberdeenshire and East Moray and in 2014 it was estimated, by extrapolating for suitable habitat and in the absence of persecution, that the area could support at least 100 breeding pairs at relatively low density (around one pair per 25 km^2 Potts 1998, Rebecca *et al.* 2016). The regional population is therefore currently around 8–10% of such estimated density. Hence, it is reasonable to suggest that the decrease in roosting numbers could be a consequence of the low regional breeding population, with the trend for both similar over the same period (Figures 2 & 4) and further influenced by the recent overall decline in the Scottish population (Wotton *et al.* 2018).

Merlins and Black Grouse were seen to co-roost with the harriers on numerous occasions. Merlins have previously been reported alongside Hen Harriers at communal roosts (Dickson 1972, Clarke 1987). The two roost areas in this study are within a regularly used Merlin breeding area and it was known that they occasionally wintered in the glen (e.g. an adult male Merlin alarm called in January 1990, *Scottish Bird News* 21: 17). So, while not unexpected, this was the first time this behaviour has been reported for North-east Scotland. In contrast, it was unexpected and surprising to record relatively large numbers of Black Grouse regularly roosting amongst the harriers. Watson and Dickson (1972) reported "a few Black Grouse and Red Grouse regularly roosting among the harriers" but they were ''never seriously attacked or pursued, although they were alarmed by harriers flying close above them and took flight". It could not be established if

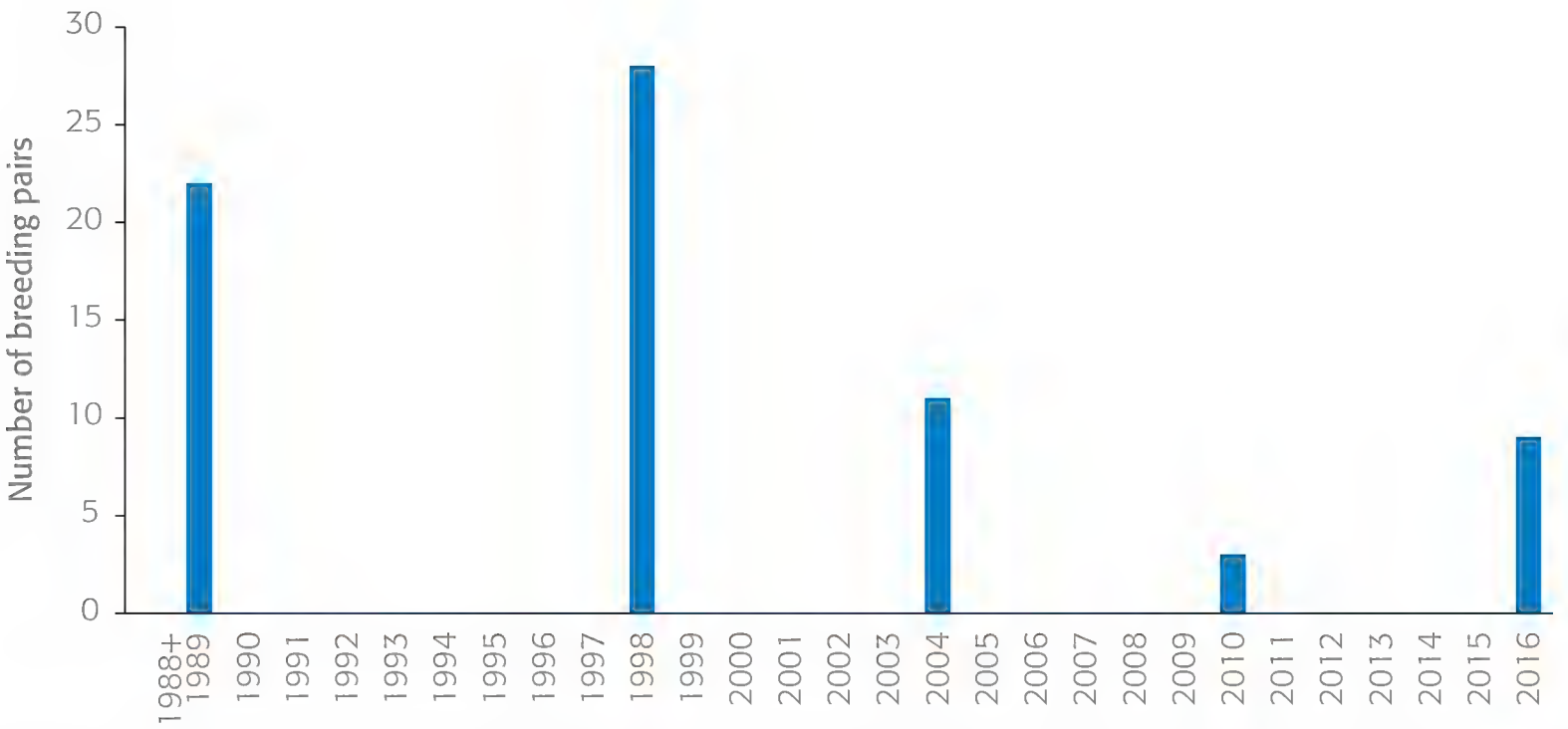

Figure 4. Number of breeding pairs of Hen Harriers in North-east Scotland from five national surveys where coverage was thorough - 1988 and 1989 combined, 1998, 2004, 2010 and 2016.

the Black Grouse used the same forms as the harriers on the same nights. They certainly used them over the same period, judging by the freshness of excreta and droppings from both species. Black Grouse presumably roost in close groups for safety and to increase awareness of predator presence. Spending the night close to a number of potential predators seems illogical, but was there some benefit? Possibly they get some advanced warning of other predators, such as the harrier's vocal defensive behaviour at the Red Fox or when the harriers were alarming and mobbing large raptors such as Buzzard and Golden Eagle (see earlier). Many visits were made to the forms to collect pellets and no remains of Black Grouse were found, suggesting that the grouse may have benefited from this unexpected liaison. Observing this co-roosting behaviour was opportunistic, not further targetable and is therefore open for further interpretation. As such, it would be interesting to know of any other close harrier-grouse roosting occurrences.

It was decided to stop regular watches in winter 2017/18 because of the low numbers over the previous five winters. However, the local and regional Hen Harrier breeding areas will still be monitored annually (Rebecca *et al.* 2016) and if the population recovers sufficiently the roost will be re-checked for occupancy. Further, as part of the RSPB LIFE + Hen Harrier project other potential roost areas will be assessed over the 2017/18 and 2018/19 winters.

Acknowledgements

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Breeding Black-throated Divers benefit from rafts in Argyll but their numbers fall

R.A. BROAD

Many Black-throated Diver Gavia arctica *breeding locations in Argyll have been monitored annually for occupation by summering pairs and breeding success since 1985. Rafts were provided by RSPB at four sites to boost breeding success and rafts were installed by other agencies at three other territories. A survey of all the sites where breeding has been reliably reported since 1985 was completed in 2017 and all breeding attempts were monitored. A review of 33 years of Black-throated Diver monitoring indicated that the Argyll breeding population has declined despite improved breeding success as a result of the raft programme.*

Monitoring

Monitoring was carried out under the appropriate Schedule 1 Licence issued by Scottish Natural Heritage although actual disturbance was usually avoided. Lochs were scanned with a tripod-mounted telescope from overlooking vantage points. If Black-throated Divers (hereafter Black-throats) could not be located, then a minimum of 30 minutes was spent scanning each section of the loch before they were considered to be vacant. Visits were made at intervals of more than two weeks and territories were considered to be occupied by a summering pair if a pair was recorded on (a) two or more visits between 23 April and 30 June or (b) breeding was confirmed. This was a contraction of the monitoring period recommended by Gilbert *et al.* (1998) in an attempt to reduce the chance of encountering wandering, failed breeders. Pairs and single Black-throats found during the full survey period of 23 April to 27 July and that didn't meet the criteria of a summering pair were recorded as non-breeders.

A breeding territory was usually a single loch but adjacent lochs were also visited if the favoured site was unoccupied and there was a history of breeding at more than one location. The first visit was generally timed to coincide with the early stages of incubation. If breeding was confirmed then additional visits were needed to determine whether hatching occurred and whether chicks survived. Ideally, surviving chicks were monitored until replacement of their downy plumage by juvenile feathers was well advanced with a pronounced juvenile facial pattern and white plumage visible along the waterline. This stage was reached when chicks were about seven weeks old, by which time they were considered to be close to fledging. Whenever possible, monitoring was carried out in favourable conditions of good light and visibility and with calm water. With a length of approximately 36 km, Loch Awe presented particular problems to survey and required repeated, sequential scanning from land-based vantage points over two or more days to cover the estimated area of 38.5 km^2. In 1994, Loch Awe was surveyed by boat.

In 1985, 1994 and 2006, extensive survey work organised by the RSPB throughout Scotland visited all recent breeding sites, a proportion of other lochs with an earlier history of breeding and a proportion of apparently suitable lochs selected at random throughout Scotland. The main objective was to determine occupation during these national survey years and it was not practical to follow up all breeding attempts. In the intervening years in Argyll annual monitoring concentrated on determining the occupancy and breeding success at territories where breeding had been confirmed. In due course, priority was given to territories that were designated as Special

Protection Areas and those where rafts had been provided. All the breeding territories were again monitored for occupation and breeding success in 2017.

Provision of rafts

In the hope of reducing the risk of flooding and land-based disturbance and boosting diver breeding success, rafts were provided at seven breeding sites in Argyll. Four rafts were constructed in Highland Region to a design developed by RSPB and Forestry Commission (Hancock 2000). These were transported by road to sites in Argyll from 1993. Two were manhandled and launched direct from the nearest track while at the other two more remote sites, rafts were airlifted by helicopter. A diver raft team from RSPB Highland provided the expertise during the initial launching, turfing and anchoring. Subsequent maintenance was carried out by local RSPB staff. One site in particular was reliant on the co-operation of the estate and the willing participation of estate staff in moving the raft twice a year between a summer mooring and a more-sheltered winter mooring site.

Further rafts were installed in response and mitigation for development at three breeding lochs. The water level at one loch was raised to provide a reliable outflow for a fish farm downstream and the raft, constructed by Forestry Commission, was successfully located on an adjacent loch. At another loch where water was being abstracted for a fish farm, the estate agreed to provide a nesting raft but it was unsuccessful. In 2014, a new raft was installed as a condition of planning permission as part of a renewable energy project. This hydro-electric scheme dammed the breeding loch, raised the water level and diverted the outflow of the main breeding loch where the first diver rafts where installed in Argyll from 1976 (Merrie 1995).

Breeding distribution

Since 1985 breeding was confirmed at 12 sites located in 11 10-km squares (Figure 1) within the Argyll bird recording area - the majority having been documented or suspected as breeding sites before 1985. The total includes one, details of which were received during correspondence after the end of the 2017 survey, that confirmed a short-lived breeding attempt occurred at a lochan in Kintyre in 2013 (J. Halliday pers. comm.). This location was unusual in that it had no previous history as a breeding site, no breeding attempt has apparently taken place since and the lochan, which was under 2 ha in area, was much smaller than the other Argyll Black-throat sites (Table 1). Also included was Loch Awe which previously was thought to have held more than one territory, where in the absence of a known nest site, a 10 km square was allocated to the location where a brood of two half-grown chicks was reported. No breeding records have been confirmed or suspected on Mull, Islay, Jura or Kintyre (except for 2013) where breeding was recorded during the 1968–72 Atlas. Neither has breeding been confirmed on Cowal since an adult with a large chick was seen in 1969. Recently, the only connectivity of the small Argyll population with breeding Black-throats in adjoining recording areas is in the north-east where Argyll meets Highland and Perth & Kinross across Rannoch Moor. The remaining outlying pairs in the south of their range are more isolated in Upper Forth and Dumfries & Galloway.

Table 1. Area (ha) of Black-throated Diver breeding lochs in Argyll, 1985–2017 (Loch Awe with an estimated area of 38.5 km² is not included).

Area (ha)	<2	9–15	20–35	40–60	200–350
Number of lochs	1	4	3	2	2

Occupation

When regular monitoring began, it was relatively straightforward with pairs present on most visits to many regular breeding sites. In more recent years, occupation at some breeding lochs was less predictable requiring an increasing number of visits to confirm the presence of a summering pair and the occurrence of apparently unoccupied territories became more frequent.

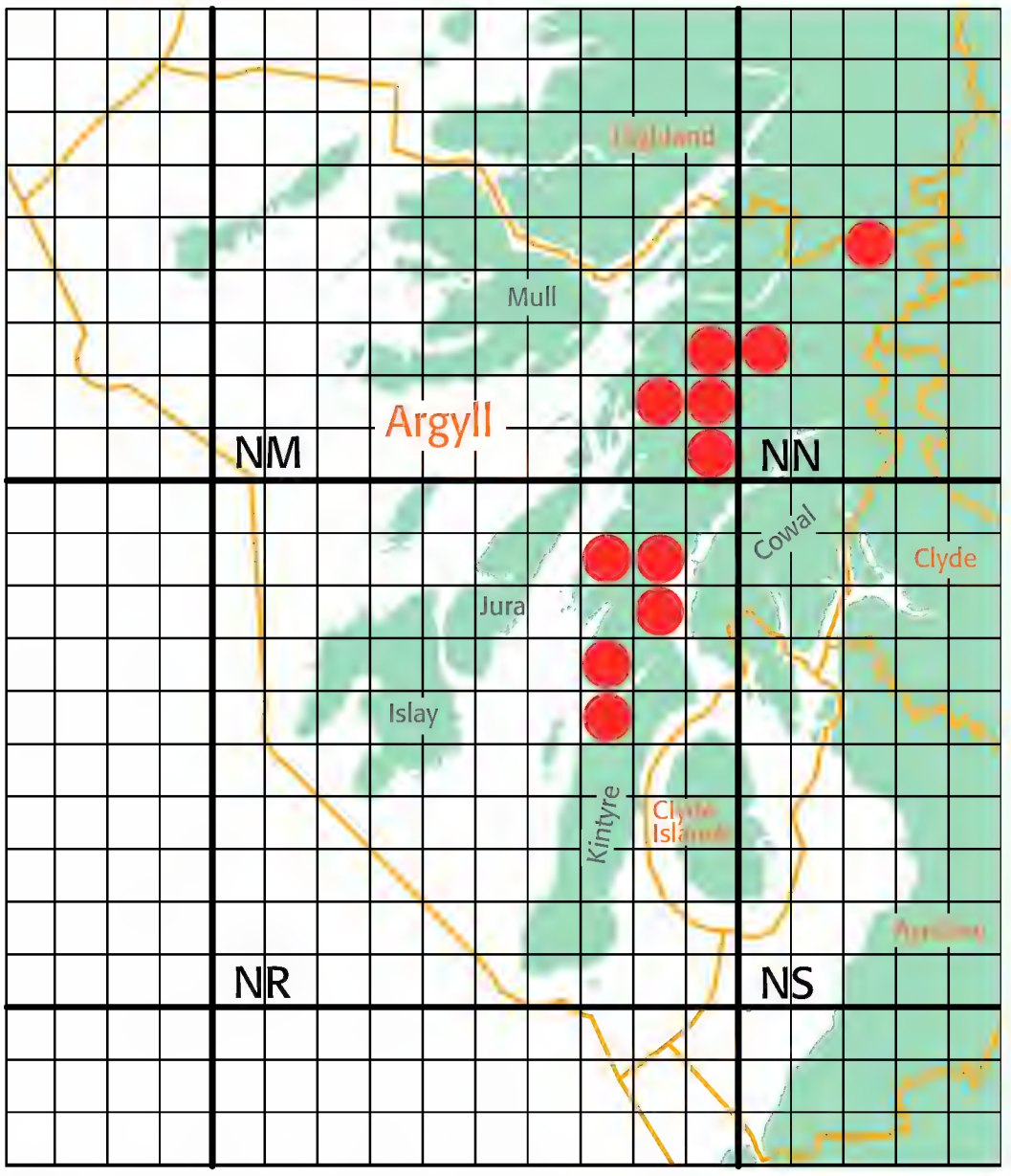

Figure 1. Black-throated Diver breeding distribution by 10-km squares in Argyll, 1985–2017.

Between 1985 and 2017, coverage to determine occupation at seven of the territories was calculated to be 94% of the maximum with more variable and less frequent coverage of 45% at the remaining four sites giving 77% coverage over all territories. All 11 were monitored and contributed to the national surveys in 1985, 1994 and 2006 and all were again fully monitored in 2017.

To complement the national survey in 1985, visits were made to virtually every additional major loch in Argyll between May and June, although some more remote areas only received single visits. In 1994, the survey included visits to additional lochs where there was some documentation as an earlier breeding site before 1985 (eight on mainland Argyll, two on Mull) and to all suitable lochs on the islands of Islay and Jura where breeding was recorded in the 1968–72 Atlas. In the intervening years, reports from birdwatchers or records via the Argyll Bird Recorder were documented and any potential breeding records followed up.

The level of occupation was generally high and although only one site had a complete record and was occupied in all 33 years, seven were occupied in more than 80% of the years. The lowest occupancy was at one loch where it was below 50%. Numbers of summering pairs were consistently high in each of the years 1994–2000 when 9–10 pairs were found. Information from the annual monitoring programme pooled and for convenience, divided into three 11-year periods (1985–95, 1996–2006 and 2007–17), indicated a downward trend in the number of territories occupied by summering pairs and a corresponding increase in the number of unoccupied sites. The decline appears to have occurred mainly since 2007 and, with only six summering pairs found in 2017 (Figure 2, Table 2), the small Argyll breeding population appeared to have declined by about one third. The four single-year surveys included in Table 2 show a similar trend.

Table 2. Summering pairs of Black-throated Divers at breeding territories (11-year periods) and single-year full surveys. (1985, 1994 & 2006 were National Survey Years).

Years	1985–95		1996–2006	2007–17
Pair-years (pairs/year)	85 (7.7)		87 (7.9)	59 (5.4)
Monitoring-years	89		100	91
Territories occupied (%)	95%		87%	65%
Full survey years	1985	1994	2006	2017
Pairs	7	10	9	6

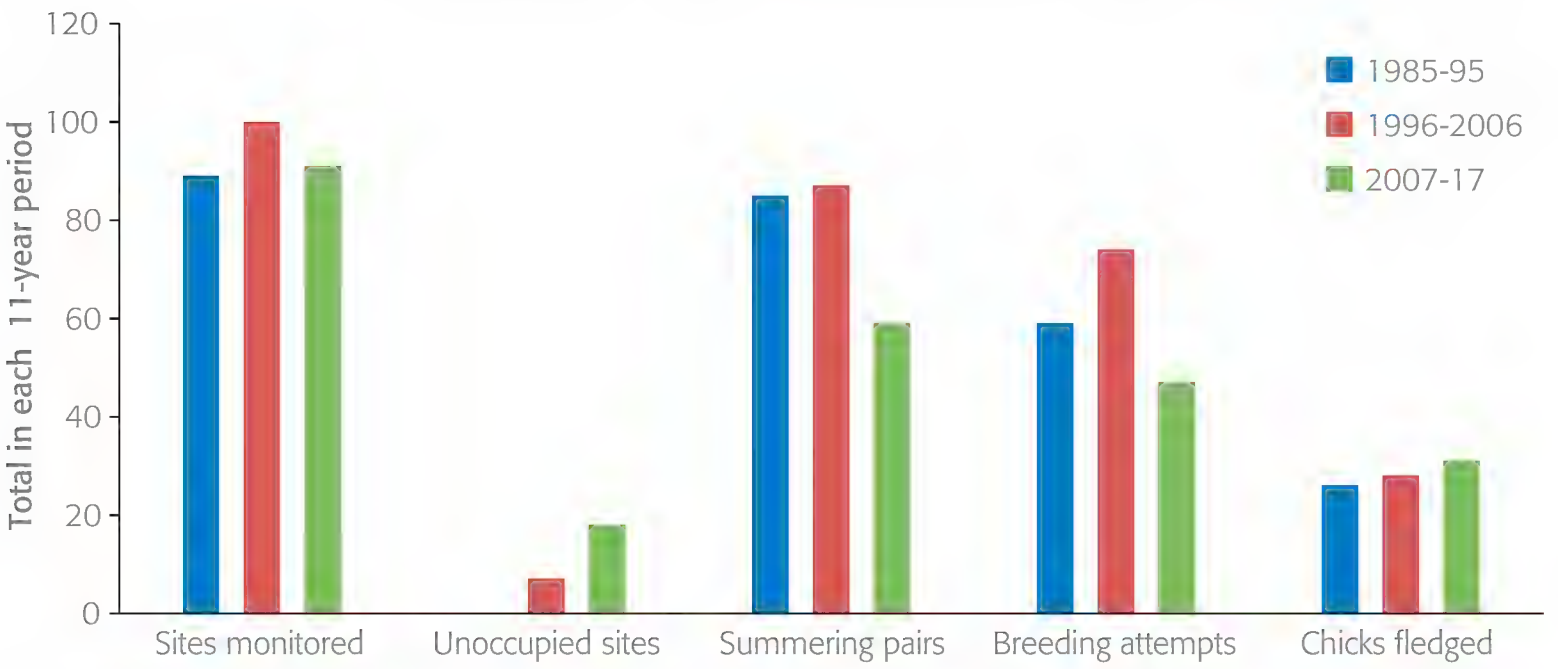

Figure 2. Black-throated Divers at breeding sites in Argyll, 1985–2017. Data pooled into successive 11-year periods.

The status of individual Black-throats on Loch Awe was sometimes uncertain. This huge loch historically held more than one summering pair and also attracted birds from other breeding lochs. An adult watched fishing during a survey of Loch Awe in June 2017 helpfully flew off with a fish towards a distant breeding loch where a pair was known to have hatched a brood.

Larger gatherings of up to 5–7 birds were infrequently reported during May–June from Kintyre, Mid and North Argyll. Additional singles or pairs of non-breeders occasionally visited historical breeding lochs and other apparently suitable lochs sometimes staying long enough to meet the criteria of summering birds and showing prospecting behaviour. In a very few cases, visiting singles or pairs of non-breeders would appear to have summered at lochs where a breeding pair was also resident. Many of the supplementary recent sightings of non-breeding Black-throats came from ornithologists surveying extensive parts of Argyll in association with development proposals for renewable energy projects and forestry proposals. These sightings further highlighted the permanence of some and the transient nature of other non-breeders. Information from their additional survey work, especially in Mid Argyll and Kintyre where a comprehensive diver survey south of a line from Tarbert to West Loch Tarbert (P. Haworth pers. comm.) confirmed no further breeding attempts. The short-lived breeding attempt reported from Kintyre in 2013 suggests however, that the small pool of non-breeders may have the potential to bolster the declining breeding population if they were to recur in successive years and find loch conditions were suitable.

Surveys across the whole breeding range in Scotland have confirmed Black-throats remain a rare breeding species although successive national surveys have shown numbers steadily increasing. Estimates of summering pairs have risen from 151 in 1985 to 189 in 1994 (this estimate was later revised by the authors to 187) and 217 in 2006 (Campbell & Talbot 1987, Whyte *et al.* 1995 & Eaton *et al.* 2007). Much of this increase appears to have happened in the stronghold in the north and west where RSPB recently confirmed that further new sites have since been colonised. There is also evidence of range extension between the 1988–91 and the 2007–11 Atlases. This has been most apparent in the south and east although it may have largely referred to non-breeding Black-throats rather than confirmed breeding events (Balmer *et al.* 2013). When records of Black-throats apparently lingering in coastal atlas squares are excluded, there is little evidence from the atlases for range expansion inland into Argyll. While it is probably far from comprehensive the body of records of all Black-throats (breeding and non-breeding) from all sources collected during the present study, tends toward there having been a modest range contraction in Argyll since 2007. The evident recent decline in breeding numbers and the tentative contraction of range in the south west run counter to the national trends.

Breeding success

Rafts were quickly accepted with Black-throats using them in preference to any available natural sites usually in the first full season that they became available. Towing a raft out at the beginning of the breeding season often caused immediate interest in any divers already present on the loch. On one occasion a prospecting bird had hauled out on the raft within minutes of its placement at its summer mooring.

Monitoring was carried out almost annually at seven sites and less frequently at a further four sites. Information from one of these sites from 1973 to 1994 has been published previously (Merrie 1995) and these data have been included for the years covered by the present study.

Information was sufficiently complete to determine the outcome of 180 breeding attempts, 75 at natural sites and 105 on rafts. Incubation generally started during the first and second weeks of May with the earliest estimated laying date of 27 April. Short-lived breeding attempts, particularly at natural sites may have been missed but on rafts there was usually conclusive evidence of any failed nesting attempts and it is unlikely that any of these went unrecorded. After nesting failures, a repeat breeding attempt was confirmed on three and suspected on a further two other occasions.

Confirmation of brood depletion and failure, particularly when large chicks were apparently lost, was often time-consuming. In this respect, one territory required particular diligence after the chick moved from its natal site to an adjacent loch well before it was capable of flight. This unlikely event was repeated in three other years and on one of these the chick was accurately aged at four weeks old. The interconnecting burn and surrounding terrain was over rough ground with a shortest horizontal distance of more than 100 m and a steep drop of 32 m between the lochs. This raised the intriguing issue of what was the trigger for such a move in a species that seemingly has such poor mobility on land?

Surviving chicks were monitored whenever possible, until about seven weeks old, generally at the end of July–early August. Several chicks were seen practising take-offs in August and one natal loch was vacated when the single chick flew off with both parents on 16 August.

In this study 32% of summering pairs raised chicks, the majority of broods that survived to fledging produced only single chicks and just 5% of summering pairs successfully fledged two chicks. There was considerable variability in productivity between breeding territories with a few sites being responsible for raising the majority of the chicks. The combined information from all natural and all raft nests found that 0.61 chicks hatched for every clutch laid and 0.47 chicks survived to fledging. Clutches laid on rafts were more successful at hatch than those laid at natural sites and, after chick losses the figures at fledging were 0.34 for natural sites and 0.56 chicks/breeding attempts on rafts (Table 3). The real difference between natural and raft sites is likely to have been greater as there was more likelihood of finding successful natural sites while short-lived nesting attempts at natural sites were more likely to have been missed. Where there was sufficient information for individual sites monitored before and after the installation of rafts the increased production of chicks from raft sites was of a similar order (Table 4).

Table 3. Outcome and productivity of breeding attempts of Black-throated Divers in Argyll, 1985–2017. (The initial failed nesting attempts are not included when they were followed by replacement clutches).

	Clutches	Hatched	Fledged
All natural sites	75	24	24
All raft sites	105	60	49
Natural and raft sites	180	84	73
Chicks (chicks/clutch) all natural sites		28 (0.37)	26 (0.34)
Chicks (chicks/clutch) all raft sites		83 (0.79)	59 (0.56)
Chicks (chicks/clutch) all natural and raft sites		111 (0.61)	85 (0.47)

The provision of rafts also appears to have been beneficial by providing nesting opportunities that increased the years when summering pairs were able to make a breeding attempt. The productivity figures above are calculated from 180 confirmed breeding attempts and do not include 45 'pair-years' when summering pairs were present but no breeding attempt was confirmed. Inclusion of summering pairs that didn't breed reduces the productivity by 20% overall. The incidence of pairs not breeding fell from 35% before to 9% after rafts were provided (Table 4).

Butterfield (2004) gave figures for productivity in Scotland since the extensive provision of diver rafts increasing from 0.26 to 0.57, while comparative figures for a smaller sample over a longer run of years increased productivity from 0.30 to 0.47 fledged chicks per summering pair in Argyll. These elevated productivity figures following the installation of rafts are close to the figures that Nilsson (1977) estimated were required for population stability.

Table 4. Outcome and productivity of all Black-throated Diver clutches in Argyll 1985–2017 before and after installation of rafts. (* includes three clutches laid at natural sites after the installation of rafts).

	Pair-years	Non-breeding pair-years	Clutches	Hatched	Fledged
Before rafts	36	12	24	11	11
After rafts*	107	12	95	57	47
Before & after rafts	143	24	119	68	58
Chicks (chicks/clutch) before rafts				12 (0.5)	11 (0.45)
Chicks (chicks/clutch) after rafts*				79 (0.83)	57 (0.6)
Chicks (chicks/clutch) before & after rafts				91 (0.76)	68 (0.57)

At least since 2007 the overall downward trend in summering pairs is mirrored by a decline in the number of breeding attempts, but the number of chicks fledged in each of the three 11-year periods remained rather similar and averaged 2.5 fledged chicks per year (Figure 2). Almost 80% of chicks fledged at five sites where rafts had been installed and breeding had been more consistently successful. The downward trend in summering pairs and breeding attempts appears to have been mainly among the least productive territories. In the most recent period, this has led to improved figures for productivity in a declining population (Table 5).

Table 5. Trend in occupation and breeding productivity of Black-throated Divers in Argyll, 1985–2017.

Monitoring periods (11 years)	1985–95	1996–2006	2007–17
Pair-years (pairs/year)	85 (7.7)	87 (7.9)	59 (5.4)
Number of chicks fledged/pair	0.3	0.33	0.54

While overall productivity in Argyll appears to be similar to the national average optimal conditions for breeding may not be sustained from the north to the south of the Scottish breeding range. In their stronghold in the Highlands, conditions enable breeders to replace 41–53% of lost clutches, with some clutches replaced twice (Mudge & Talbot 1993). With similar levels of nesting failures in Argyll, environmental factors have enabled breeders to replace no more than 5% of failed clutches.

Nesting failures

More than half of all clutches failed before hatching. A few of these were incubated sometimes for weeks beyond the expected hatch date. The causes of nesting failures and brood depletion were rarely found during monitoring visits although adverse weather was the single most immediate explanation for many. Fluctuating water levels leading to flooding or draw-down, remained a hazard at natural sites and a few raft nests may have been lost to wave action during severe weather. Incubating adults were occasionally flushed by low flying Grey Herons *Ardea cinerea* and fishing Ospreys *Pandion haliaetus* but such temporary disturbances were not a threat

to the breeding attempts. A White-tailed Eagle *Haliaeetus albicilla* perched on an unoccupied diver nesting island caused panic among the small gull colony and others have been seen patrolling close to occupied diver lochs. With White-tailed Eagles increasing on mainland Argyll interactions with Black-throats could happen in the future.

During a study in Highland Region, Mudge & Talbot (1993) found that 48% of nest losses were due to predation. Direct evidence of mammalian predation in the present study came from the post mortem of an adult Black-throat from a breeding loch. Although it was uncertain whether it was killed by an American Mink *Neovison vison* or an Otter *Lutra lutra* there were pointers to the former. Signs of mammalian predation were found among the small colonies of Common Gulls *Larus canus* that nested on islands where Black-throat nests also failed. Mink are known to have been controlled at some diver breeding lochs but spikes of predation have continued to be suspected on occasion at some of the dwindling gull colonies.

Hancock (2000) cited examples where loafing or nesting Canada Geese *Branta canadensis* excluded divers from using rafts in Sweden and suspicions of competition over a natural nest island in Scotland. Seemingly undeterred by spikes of mammalian predation, Canada Geese have colonised hill lochs across much of mainland Argyll including nine of the 12 lochs where Black-throats have bred. On the few occasions when Canada Geese nested successfully on a raft, Black-throats did not nest there simultaneously. However, a degree of uneasy tolerance seemed to have been established at one site where no more than a few metres of water separated Black-throats nesting on a raft and Canada Geese nesting on a crannog. Elsewhere on the water, an aggressive Black-throat had no difficulty in preventing a pair of Canada Geese from getting close to a raft where the divers were breeding. Similar, one-sided encounters have been seen with Black-throats chasing off a family of Red-breasted Mergansers *Mergus serrator* and aggressively pursuing visiting Cormorants *Phalacrocorax carbo* until they left the loch.

Conservation

Few Argyll breeding lochs have remained untouched by change over the last 30 years. The long list of negative factors and the shorter list of positive measures that have been put in place at each breeding loch (Appendix 1) leave little doubt that few, if any, now fit the image of the typical undisturbed and remote Black-throated Diver breeding loch. The impact of many of these factors was difficult to quantify although it is likely that the impact of some more obvious hydrological changes may have been controlled and offset by the provision of rafts.

The push for renewable energy has seen windfarms developed within foraging distance of several breeding lochs and others have been modified for hydro-electric schemes or to provide a dependable water supply for fish farms. On the credit side, Scottish Natural Heritage negotiated to ensure that water levels were maintained at optimal levels and not drawn down during the breeding season at two sites. Afforestation during the 20th century within the catchment and around the shores of some breeding lochs was being restructured and replanted with the next rotation. Increasing angling interests and associated re-stocking of lochs continued with potentially negative impacts on natural populations of small fishes. Levels of recreational disturbance have increased markedly with walkers, campers and anglers, usually unwittingly increasing the risk of disturbance to breeding birds. None of these factors stand alone as the reason for the recent decline in the Argyll Black-throats but most can influence the natural productivity of the breeding lochs. Jackson (2005) concluded that many factors including global warming could negatively influence the numbers and availability of small fish prey, especially small salmonids which were of fundamental importance for diver conservation. These conclusions from his study in Highland Region seem equally pertinent in Argyll.

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Many folk have been involved with diver monitoring on Forestry Commission ground where it became a recurrent co-operative venture following the initial support of the late Howard Embleton and his team and more recently John Taylor's involvement has been much appreciated. Similarly, monitoring in the Knapdale Lochs Special Protection Area became a co-operative venture in conjunction with Stan Philips, Scottish Natural Heritage. Grateful thanks are due to them all and also to Duncan Cameron, Chris Cathrine, John Halliday, Paul Howarth, Aidan MacCormack, Simon Lawrence and Blair Urquhart who contributed important supplementary Black-throated Diver information while working as environmental consultants in Argyll.

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The Rare Breeding Birds Panel reports numbers of Black-throated Divers in Scotland each year but since the annual survey in 2006 fewer than half of the national population is recorded each year, meaning that we have little knowledge of the current number of breeding pairs in Scotland and we don't know if numbers are increasing nationally, or decreasing as they seem to be in Argyll. We encourage everyone to report *all* pairs of these divers on potential breeding lochs to the local SOC recorder, ideally with some indication of breeding evidence. Accurate evidence of their status is essential for their conservation. Eds.

Appendix 1. Changes, issues and incidents at Black-throated Diver breeding lochs in Argyll, 1985–2017.

Black-throated Diver Breeding Lochs	A	B	C	D	E	F	G	H	I	J	K	L	Total
Raft provided	+				+	+	+	+		+	+[1]		7
Hydrological													
Hydrological: water level managed for divers[2]								+			+		2
Hydrological: water level raised for fishfarm							+						1
Hydrological: water level raised for hydro scheme						+							1
Hydrological: water level fluctuations (observed)	+	+	+	+				+	+		+	+	8
Hydrological: abstraction for fishfarm							+				+		2
Hydrological: abstraction for renewable energy						+							1
Hydrological: abstraction (other)								+					1
Recreational													
Angling: disturbance from land or boat (incidents)	+	+	+	+	+	+	+	+		+	+	+	11
Angling: entanglement in discarded fishing tackle				+									1
> Disturbance: recreational boating (incidents)												+	1
> Disturbance: walkers, wild camping (incidents)	+			+	+	+							4
Forestry													
Forestry operations		+	+	+			+	+		+	+	+	8
Development													
Hydro scheme (1 new, 2 existing)		+				+						+	3
Fishfarm (1 new, 1 modified)							+				+		2
Windfarm constructed within 5 km		+	+			+	+			+			5
Biological													
Mammalian predation (evidence of mink/otter)	+	+	+	+	+	+	+	+	+	+	+	+	12
< Breeding Common Gulls		+	+			+		+	+		+		6
Colonisation by Canada Geese	+	+	+	+	+	+		+			+	+	9
< Fish stock (reported)	+												1

[1] Raft available to divers for very limited period
[2] Water level managed for divers and maintained at optimum during breeding season

Plate 178. Male 'Red-spotted Bluethroat', Moray, 2 August 2016. © *Robert Ince*

First successful breeding of 'Red-spotted Bluethroat' in Moray in 2016

R. INCE

'Red-spotted Bluethroats' *Luscinia svecica svecica* were observed in an upland area of Moray over 900 metres a.s.l., between 23 June and 2 August 2016 (Ince 2018). All observations were within an area of less than 5 ha of arctic-alpine habitat which is snow covered for six to eight months of the year with winds sometimes exceeding 100 mph. Plant life is low-growing and sparse, limited to a small area with Mat-grass *Nardus stricta*, some Mountain Sedge *Carex bigelowii*, Starry Saxifrage *Saxifraga stellaris*, Fir Clubmoss *Huperzia selago* and Parsley Fern *Cryptogramma crispa*. Additionally, in moist areas, there is a dense carpet of mosses and lichens.

My first sighting was on 26 June 2016 at the site where Phil Golder had reported seeing a Bluethroat on the 23rd. The male Bluethroat was singing from the top of a stony outcrop which I came to recognise as his favourite song post. I watched and listened for three hours and observed interaction between the male and the female. On the female's arrival below his song post, the male chased after her and they flew near to the ground, in close proximity and briefly gained altitude to *c.* 4 m before returning to close-to-ground chasing. In the three hours, I saw the female only three times. She always flew low to the ground and always to within a few metres of the singing male. On two occasions chasing took place. She always appeared from, and returned to, a stony area immediately south-west of his song post. The male Bluethroat was quite mobile. He would sing from his favourite song post, fly up, singing and then, still in song, he would glide, tail outstretched, to a rock. Here he would sometimes sing and at other times remain silent before repeating his aerial display. I estimated that he did not venture more than 150 m from his song post.

Having established that there was a pair, all further monitoring was done under licence.

Plates 179–180. Arctic-alpine habitat, similar to the Bluethroat breeding site, Moray, June 2016. © *Robert Ince*

On 4 July, it was raining. I revisited the spot but initially neither saw nor heard any birds. When the rain stopped I heard the male Bluethroat singing. It was a short song, just the 'chek chek' part. Intermittently, between showers, I was able to hear the 'chek chek' and to photograph the male for record purposes. An hour later, the male sang again from the mound, this time mimicking a Snow Bunting. It did this several times before disappearing behind the mound. Mimicking of both natural and man-made sounds appears to be quite common in Bluethroats; McCallum (2007) describes one particular male that mimicked more than 14 different species of birds as well as frogs and crickets! Ryabitsev (1998) studying Willow Warblers in the taiga describes one male Bluethroat mimicking an Ass. More showers came in and bird song and activity ceased. The almost continuous singing and aerial displays of 26 June were absent, replaced by short and periodic song and no display. This same behaviour was recorded by Portenko (1989) in the Chukchui peninsula, Siberia. Although the male re-appeared on the mound once the rain stopped, I suspected that the nest and female might be somewhere close by. However, the showery weather made it inappropriate to search for the nest. After four and a half hours observation, I decided to quit as the rain was by then relentless.

On 12 July, rain followed by hill fog and low cloud persisted throughout the watch period of 6¼ hours with intervals of brightness when the sun broke through. The female Bluethroat landed and briefly foraged before alighting on top of a stone approximately 15 m from my observation position. She sat there for only 2–3 seconds. This brief sighting was the only time I observed the female in the entire six-hour watch. At no time did I either see or hear the male.

On 14, 19 and 24 July, all three days commenced with hill fog and low cloud. On each day, no Bluethroats were seen or heard during four and a half hours observation each day.

On 28 July, after a poor start, cloud lifted rapidly and it remained sunny for the rest of the day. Approximately 200 m from the site, a Bluethroat was foraging amongst the vegetation at the base of a large stone. My first impression was that this was a juvenile as it had a fluffy appearance. It was hopping around, foraging.

On 2 August, there was a blue sky and a light breeze. I started watching where I saw a fledgling on 28 July. I sat for 30 minutes, changed position a couple more times for 30-minute periods, seeing nothing. My final move was to a position near where I had previously watched the adult Bluethroats, I spotted movement on a large stone, some 50 m away and I could see the striking blue throat of the male. Looking at photographs I had taken at this point, revealed that the male Bluethroat had small food items in its bill. I saw the male fly off low. I moved slowly forward and saw movement - my binoculars confirmed a fledgling Bluethroat.

The fledgling had the signature red colour at the base of its stubby tail. Several pin feathers were visible. The fledgling would occasionally call and open its bill. It scurried and hopped about - there was no flying, just a gliding and fluttering hop, at best. Some 12 minutes later the adult male returned. He foraged in a wet mossy area and had a food item in his bill that was too small for me to identify through my binoculars. The male would tolerate my presence only so long as I was at least 40 m from the fledgling. If the fledgling became aware of the male carrying food items, it hopped and scrambled at high speed towards the adult, its bill open, often emitting sounds.

Plate 181. Male 'Red-spotted Bluethroat' with food, Moray, 2 August 2016. © *Robert Ince*

Plate 182. Male 'Red-spotted Bluethroat' with fledgling, Moray, 2 August 2016. © *Robert Ince*

The fledgling was pecking at unidentified items which I presumed to be tiny invertebrates. For the next 45 minutes, I was able to watch it forage up to 20 m away, hopping among the stones. Once, unaware of me sitting there, it came within 5 m. The adult male was either having difficulty in finding food for the fledgling or, possibly, it was feeding another fledgling that I could not see. None of my passive observation appeared to disturb the birds. Throughout my one hour 35 minute observation of the fledgling, it kept to a shallow gully. This area was just 30 m from where I had sat earlier that morning. Despite this, the fledgling could not be observed from that spot due to the topography. Additionally, due to the adult male flying so low, it too would have gone unnoticed by me. At no time did I see the female Bluethroat so it is not known whether she was dead or alive and feeding another fledgling(s) elsewhere. Brood division with fledgling dispersion is well known in this species (Anthonisen *et al.* 1997).

It rapidly clouded over and a keen wind developed. I left whilst the fledgling was still foraging in the gully. I had hoped to visit the site for further observations later in the week but the weather was dire with a period of storms and continuous bad weather. It is unknown whether the adult and fledgling Bluethroats survived. I made three further visits to the site without observing any Bluethroats.

It is remarkable that at least one Bluethroat fledged. Maximum food availability in the area in 2016 was in mid-June when there was a good supply of craneflies Tipulidae. The 2016 pair were a month too late to make use of these optimum breeding conditions.

This is the first verified successful breeding of Bluethroat in Moray and only the third in Scotland. Breeding of 'Red-spotted Bluethroat' in the UK prior to 2016 has only been confirmed on three occasions (Forrester *et al.* 2007). The first was at Insh Marshes, Inverness-shire, in 1968, but the eggs were predated. The first successful breeding was also at Insh Marshes, in 1985, following a large spring influx of migrant Bluethroats (Murray 1987). The second successful attempt occurred in 1995 (Benn 1995) a few kilometres from Tomatin, Inverness-shire, also following an above-average spring influx (Murray 1987, Forrester *et al.* 2007). In 2016, however, there was no reported spring influx of 'Red-spotted Bluethroats'. On 7 August 1995, a first-year male Bluethroat in post-juvenile moult was mist-netted on the Beauly Firth (Harvey 1995). It is probable that this individual had been hatched in Scotland. It is probable that other breeding attempts by Bluethroats go undetected or unreported.

Plates 183–184. Fledgling 'Red-spotted Bluethroat', Moray, 2 August 2016. © *Robert Ince*

On 23 May 1987, Rik Smith found a freshly predated male 'Red-spotted Bluethroat' near Feith Buidhe in the Cairngorms during the Mountain Ecology Project (Cook 1992). However, there was no sign of a female or any other evidence that a breeding attempt was made.

The habitat used by these Bluethroats is atypical. I cannot find in the literature any previous nesting attempts by this species in this type of terrain.

In addition to the more typical wooded tundra habitat, Cramp (1988) mentions breeding on high Scandinavian fjells and on damp alpine meadows in the USSR up to 4000 m.

Duncan Halley who has extensive experience of the species in Scandinavia writes: *"I have never seen or heard of Bluethroats nesting in habitat without at least some montane birch or willow vegetation, though they go right to the top of the willow zone where plants are only knee high. They're not an arctic-alpine zone species. Nothing in the Norwegian literature says otherwise. I've reread our (Norwegian) habitat description, and it's a characteristic species of the birch and willow zones (i.e. above about 700 m to about 950 m) but never mentioned as occurring in wholly open habitat. I have never heard that that is different in Russia. So, elevation of your record is right but the habitat is not. This is a species I would be confident would recolonize Scotland if and when suitable habitat became available again (see Halley 2011)."*

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Counts of Puffins in Shetland suggest an apparent decline in numbers

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During May 2017, we counted Apparently Occupied Burrows (AOBs) of Puffins in a reference plot at Hermaness National Nature Reserve, Shetland and found that numbers had declined by 69% since 2002 (from 145 to 45 AOBs). Across the wider Hermaness site, counts of individuals were adjusted using a correction factor based on the reference plot, and these indicated that declines of 42% have occurred. Counts made of individuals on land in 29 areas of Shetland (including Hermaness) in May, where burrows were not accessible, were lower than anticipated but valid comparison with past counts is not possible since these had been made in June when increasing numbers of non-breeders attend colonies. Taken together with findings from other studies in Shetland, our results suggest that Shetland's Puffin population has declined.

Introduction

Puffin *Fratercula arctica* breeding failures have been seen in Iceland and Norway (where 80% of the world's Puffins breed; BirdLife International 2015), and further declines in numbers are anticipated, leading to the species being declared Vulnerable to extinction on the IUCN Red List (BirdLife International, 2015). These breeding failures are often attributed to global warming causing oceanographic changes that result in changes in Puffin prey distribution and abundance (Durant *et al.* 2003). Around 10% of the world's Puffins breed around the coast of Britain and Ireland, with the majority in Scotland (82%), followed by England (13%) and smaller populations in Ireland (4%) and Wales (2%) (Mitchell *et al.* 2004). Shetland has historically held 14–17% of the Puffins breeding in Britain and Ireland (Lloyd *et al.* 1991, Mitchell *et al.* 2004). The Shetland Puffin population has been assessed three times. Operation Seafarer (1969–70) recorded 65,054 Apparently Occupied Burrows (AOBs), the Seabird Colony Register (1985–88) 104,381 AOBs, and Seabird 2000 (1998–2002) 107,676 AOBs. These suggested an upward population trend of 66% between 1970 and the mid-1980s, slowing to just 3% between the mid-1980s to the turn of the century (Mitchell *et al.* 2004). Since then considerable decreases have been observed in other seabirds (Mavor *et al.* 2008) and in the three Puffin colonies in Shetland that have been counted more recently (Table 1; Miles *et al.* 2015).

Table 1. Recent Puffin population estimates at three colonies in Shetland compared to estimates in 1999–2000. All estimates are based on counts of individuals and were carried out in May (Noss); late April (Fair Isle, and Foula in 2016); or early June (Foula, 2000). *Counts suggest declines on all three sites though caution should be used when interpreting population change using counts of individuals, particularly on Foula where counts were made in different months.

Colony	Most recent count (year in brackets)	Count in 1999–2000 (year in brackets)	% change between counts*	References
Noss	1,174 (2017)	1,892 (1999)	-37.9	Nisbet and Denton, 2017; Mitchell *et al.* 2004
Fair Isle	6,666 (2015)	15,000 (2000)	-62.5	Parnaby *et al.* 2017, Miles *et al.* 2015
Foula	5,055 (2016)	22,500 (2000)	-77.5	SNH/Foula Ranger Service Unpublished data, Mitchell *et al.* 2004

Puffins are difficult to census because of their burrow nesting habits and often inaccessible breeding locations. The most reliable method is by long-term monitoring of AOBs in sample areas of a colony (Walsh *et al.* 1995) but this requires access to burrows, which is rarely possible in Shetland due to the steep and inaccessible terrain (Mitchell *et al.* 2004). When burrows cannot be accessed, the standard protocol is to count birds that are on land (Walsh *et al.* 1995). These counts provide an estimate, which could differ from the true population size by an order of magnitude (Walsh *et al.* 1995, Calvert & Robertson 2002) but such counts are useful to indicate change in populations where those changes are large and over longer time periods (Miles *et al.* 2015). Standard monitoring methods (Walsh *et al.* 1995, Mitchell *et al.* 2004) advise that these counts of individual birds are best obtained during the pre-laying period (mid-April to early May in Shetland) but if counts cannot be made at this stage then they should be obtained before non-breeding birds begin attending the colony, which in Shetland is usually in June (Harris & Wanless 2011). However, because the Shetland coastline is long and inaccessible, Puffins in the majority of locations have normally been counted during June at the same time as the optimal count period for other cliff-nesting seabirds (though Fair Isle and Noss have been counted during April/May). These previous surveys in June will result in counts that are inflated by the presence of non-breeding birds. We counted Puffins at key colonies on mainland Shetland, Yell and Unst, in order to estimate the breeding populations at these sites. We compare our counts with Seabird 2000 or other previous surveys and discuss possible changes in Puffin populations in Shetland.

Materials and Methods

The largest colony in our sample was at Hermaness National Nature Reserve, hereafter 'Hermaness'. This colony has been previously counted using a site-specific method in June (Martin 1995, 1997, 2002) which attempts to account for the fact that so few of the burrows at this site are visible due to Puffins nesting in boulders, a method which has also been used on The Shiants (Brooke 1972). In this method, a reference plot at Sothers Brek (Plate 185), where AOBs had previously been counted, was used to calculate a ratio of visible birds on land: AOBs every five minutes, while the wider site is counted by surveyors. It was difficult to relocate this reference plot (Plate 185, blue line) at Sothers Brek, which meant the area we surveyed for the reference plot was later realised to be slightly larger than the original reference plot (Plate 185, gold line). We counted the number of AOBs in the reference plot on 22 May 2017. On 28 June, 11 people simultaneously surveyed allotted sections of the whole Hermaness site (c. 8 km in total length), over the course of an hour recording the time of count sections into five-minute bands while a twelfth counter counted visible birds at the reference plot every five minutes. Martin (1995, 1997, 2002) did this to attempt to account for changes in loafing numbers over the course of the survey. The ratio for the corresponding five-minute interval was then applied to the timed counts of birds on land across the whole Hermaness colony. Following Martin (1995, 1997, 2002) we multiplied the number of visible birds on land around the reserve in every five-minute band by the number of AOBs previously counted in the reference plot and divided by the number of birds visible in the plot at the same time of evening under the assumption that loafing rates are consistent across the wider Hermaness site. For one of our five-minute intervals the count of birds on land within the reference plot was zero, precluding the calculation of a meaningful ratio. Therefore, for this time interval we averaged the number of visible birds in the reference plot across the previous and next five-minute interval to obtain a non-zero ratio. To be consistent with Martin (1995, 1997, 2002) we added 10% to the adjusted count to correct for birds on land assumed to have been missed (due to the cliff terrain).

Separately, we counted Puffins during May at selected colonies on Shetland, including Hermaness, prioritizing larger colonies, as measured in Seabird 2000. We used the same stretches of coastline ('count sectors') as had been used in Seabird 2000 and all data were submitted to the JNCC's Seabird Monitoring Programme. No count sectors were accessible along their entirety for burrow inspection and therefore counts of individuals on land were used. In addition, separate counts were made of Puffins sitting on the sea within 200 m of land and flying.

Counts were conducted from land at vantage points along the coastline of each count sector, taking care to ensure that the whole census sector had been counted while minimising double-counting of individuals (both within and between sectors). All counters had been trained in Puffin census methods by an experienced Puffin surveyor (RH) and used binoculars (8x or 10x magnification) to count Puffins within a clearly viewable range (varied depending on conditions but not more than 300m). Seabird 2000 prescribed that Puffins be counted during 'daylight' (Mitchell *et al.* 2004) while Walsh *et al.* (1995) recommend that counts are done in the evening when the number of individuals around the colony are usually highest. We aimed to do counts in the evening, but because of logistical (e.g. available ferries) and weather constraints (poor visibility (<200 m due to fog); persistent rain; or wind above Beaufort scale 4) we also made counts during the day. Where time allowed we counted sectors more than once, at least seven hours apart.

Plate 185. Sothers Brek reference plot, Hermaness, Shetland, in 1988 (blue) and 2017 (gold). © *Robert Hughes*

Results

Hermaness

Weather conditions were calm at Hermaness on 28 June 2017 and attendance at the colony seemed high relative to attendance seen since 2015 (Rachel Cartwright pers. obs.), which suggests our count was conducted when colony attendance was relatively high and the count was made prior to dusk, as had been done in previous years. A total of 45 AOBs were counted in the reference plot. The number of birds seen on land at the reference plot was generally lower than the number of AOBs present. We counted 3,588 birds on land over the whole count sector which, when adjusted by the ratio from the reference plot, equates to an estimate of 12,521 AOBs (Table 2). A total of 3,043 birds on the sea and 1,069 flying birds were counted. For Hermaness, it was possible to calculate percentage change in numbers since previous surveys because the same methodologies and months of survey were used for each (Table 3). The number of AOBs in the reference plot decreased by 69% since 2002 and 79% since 1997. Across the Hermaness count sector, the unadjusted counts of birds on land decreased by 77% between 1997 and 2017 and the adjusted counts decreased by 42% since 2002 and 58% since 1997.

Counts of Puffins in Shetland suggest an apparent decline in numbers

1. Ayre of Tonga to Tonga Stack
2. Birrier to Rivalee
3. Broad Stack to Stack of Barons Geo
4. Burn of Garth to Broad Stack
5. Burrafirth to The Keen
6. Fugla Geo
7. Geo of Vigon to Birrier
8. Greff to Ayre of Tonga
9. Hermaness NNR
10. Hols Hellier
11. Kame to Corbie Geo
12. Landvillas to Scarfi Taing
13. Norwick Herda
14. Rivvalee to Wester Lee of Gloup
15. Scarfi Taing to Noup o' Noss
16. Skitstack to Woodwick
17. Snarra Voe to The Keen
18. South Geo Brough to Greff
19. Stack o' da Noup to Kame
20. Stack of Barons Geo to The Nev
21. Sumburgh Head
22. The Kame to Landvillas
23. The Keen to Lunda Wick
24. The Lug
25. The Nev to The Kame
26. Uyea
27. Virdick
28. Wick of Collaster to Skitstack
29. Woodwick to South Geo Brough
Foula
Noss
Fair Isle
Contains OS data © Crown Copyright and database right 2017

Figure 1. Locations of Puffin count sector start points in Shetland, 2017.

Table 2. Hermaness-specific colony size estimation following Martin (1995, 1997, 2002). Colony-wide counts on 28 June of birds on land, sea and flying and birds visible on land within a reference plot previously determined to have 45 AOBs, recorded in five-minute bands.

	Time (BST)												Total
	22:30	22:35	22:40	22:45	22:50	22:55	23:00	23:05	23:10	23:15	23:20	23:25	
Land	178	900	644	145	33	116	56	317	39	662	140	358	**3,588**
Sea	590	166	446	0	1,350	34	39	401	0	17	0	0	**3,043**
Flying	188	316	142	84	52	42	60	55	10	68	7	45	**1,069**
Birds on land at reference plot	21	19	10	0	14	39	43	4	38	13	45	72	
AOBs in reference plot	45	45	45	45	45	45	45	45	45	45	45	45	
Adjusted land count	381	2,132	2,898	544*	106	134	59	3,566	46	2,292	140	224	**12,521**

*birds on land at reference plot - value of 12 used as an average of previous and following counts (see methods)

Table 3. Puffin numbers at Hermaness (1995–2017) in Sothers Brek reference plot (AOBs) and over whole reserve (unadjusted birds on land and adjusted birds on land), together with percentage changes between successive counts. Data taken from Martin (1995, 1997 and 2002) and this study (2017).

Year	AOBs in plot		Birds on land - whole reserve unadjusted		Birds on land - whole reserve adjusted	
	Number	Percentage change	Unadjusted	Percentage change	Adjusted	Percentage change
1995	147		unavailable		22,000	
1997	218	+48.3	15,600		28,300	+29
2002	145	-33.5	unavailable		23,661	-16
2017	45	-69.0	3,588	-77.0	13,773	-42

Elsewhere

In total, 50 counts of 29 count sectors were conducted on 18 days between 2 May and 24 May 2017 (Table 4; Figure 1), with 16 count sectors having more than one count.

Counts of birds on land were generally low with 14 out of 29 completed count sectors having no Puffins on land (Table 4) and two sectors had no Puffins on land, sea or flying. As expected, repeat counts often varied, with the most marked variation being at Sumburgh Head where the number of birds on land ranged from 20 to 474 individuals over three counts. Of the 4,728 Puffins counted during May (including multiple counts at the same colony) the majority (71%; 3,371 individuals) were counted on the water with far fewer counted on land (16%; 735 individuals) or flying (13%; 622 individuals).

It is not possible to make a valid comparison with past counts since these had been made in June when increasing numbers of immatures attend the colony, so counts made then are likely to be substantially higher than those made in May (Harris & Wanless 2011). For instance, we counted only 20 birds ashore at Hermaness on both 21 and 23 May but 3,588 on 28 June (Tables 1 and 4). However, none of the 29 completed count sectors in 2017 had more Puffins than were reported in Seabird 2000 (Table 5). We counted 578 Puffins on land during our May counts, compared to 32,133 Puffins on land counted in these sectors during June in Seabird 2000. If we exclude the largest site, Hermaness, then our May counts for Puffins on land total 558 Puffins, compared to 8,472 during Seabird 2000.

Table 4. Number of Puffins counted at 29 count sectors in Shetland during May 2017 (see Figure 1).

Site number	Site Name	Date	Time	Land	Sea	Flying
1	Ayre of Tonga to Tonga Stack	18 May 17	13:10–13:43	0	2	6
	Ayre of Tonga to Tonga Stack	19 May 17	15:30–15:39	0	59	3
2	Birrier to Rivalee	11 May 17	16:05–16:34	0	10	0
3	Broad Stack to Stack of Barons Geo	4 May 17	10:55–11:12	0	24	1
	Broad Stack to Stack of Barons Geo	6 May 17	11:22–11:35	0	0	0
	Broad Stack to Stack of Barons Geo	8 May 17	12:25–12:43	0	0	0
4	Burn of Garth to Broad Stack	4 May 17	11:15–12:03	2	4	1
	Burn of Garth to Broad Stack	6 May 17	09:43–11:16	0	0	0
	Burn of Garth to Broad Stack	8 May 17	09:43–12:16	0	1	1
5	Burrafirth to The Keen	22 May 17	09:50–10:52	0	0	0
6	Fugla Geo	15 May 17	06:49–08:42	0	2	0
	Fugla Geo	15 May 17	17:12–19:17	0	0	0
7	Geo of Vigon to Birrier	11 May 17	16:36–16:58	0	0	0
8	Greff to Ayre of Tonga	18 May 17	11:58–12:27	0	79	3
	Greff to Ayre of Tonga	19 May 17	15:30–15:39	0	22	2
9	Hermaness NNR	21 May 17	19:00–20:22	20	261	36
	Hermaness NNR	23 May 17	20:30–22:00	20	1,569	78
10	Hols Hellier	24 May 17	10:05–10:36	2	92	8
11	Kame to Corbie Geo	5 May 17	10:32–10:45	5	2	1
12	Landvillas to Scarfi Taing	4 May 17	14:36–15:10	0	11	2
	Landvillas to Scarfi Taing	5 May 17	10:05–10:45	7	79	27
13	Norwick Herda	24 May 17	10:06–11:18	0	7	0
14	Rivvalee to Wester Lee of Gloup	11 May 17	15:08–16:03	0	24	0
	Rivvalee to Wester Lee of Gloup	15 May 17	17:13–18:14	1	8	0
15	Scarfi Taing to Noup o' Noss	4 May 17	13:43–14:36	36	130	11
16	Skitstack to Woodwick	18 May 17	09:24–11:09	1	8	1
17	Snarra Voe to The Keen	22 May 17	11:28–12:27	0	3	0
	Snarra Voe to The Keen	19 May 17	11:22–12:20	2	6	10
18	South Geo Brough to Greff	18 May 17	10:20–11:58	0	48	10
19	Stack o' da Noup to Kame	4 May 17	13:28–13:38	0	1	0
	Stack o' da Noup to Kame	5 May 17	10:13–10:32	8	71	1
20	Stack of Barons Geo to The Nev	2 May 17	18:34–19:44	2	380	16
	Stack of Barons Geo to The Nev	10 May 17	11:05–12:27	0	4	3
21	Sumburgh Head	2 May 17	18:13–19:28	20	13	37
	Sumburgh Head	3 May 17	09:35–11:05	117	73	88
	Sumburgh Head	4 May 17	09:00–10:45	474	84	242
22	The Kame to Landvillas	4 May 17	15:10–16:44	0	18	2
	The Kame to Landvillas	5 May 17	10:45–11:04	1	38	1
	The Kame to Landvillas	8 May 17	12:30–12:50	0	1	0
23	The Keen to Lunda Wick	17 May 17	16:40–17:31	0	0	0
	The Keen to Lunda Wick	19 May 17	10:04–11:20	0	0	8
	The Keen to Lunda Wick	22 May 17	10:31–11:27	0	0	1
24	The Lug	24 May 17	10:36–11:14	0	100	8
25	The Nev to The Kame	2 May 17	18:40–19:45	9	78	1
	The Nev to The Kame	8 May 17	11:40–12:30	0	0	0
26	Uyea	9 May 17	14:19–15:09	8	33	10
27	Virdick	24 May 17	10:18–11:09	0	8	0
28	Wick of Collaster to Skitstack	18 May 17	11:10–12:10	0	11	0
29	Woodwick to South Geo Brough	17 May 17	17:00–18:18	0	7	0
	Woodwick to South Geo Brough	18 May 17	09:22–10:20	0	0	3

Table 5. Puffin counts at 29 count sectors in Shetland during Seabird 2000 and 2017. Where multiple counts were made in 2017, the highest count is shown. Seabird 2000 data downloaded from www.jncc.defra.gov.uk on 10 June 2017. * Hermaness specific method used

	Seabird 2000 (1999–2002) June - likely to include non-breeders		May 2017 - unlikely to include non-breeders	
Subsite	**Land**	**Sea**	**Land**	**Sea**
Ayre of Tonga to Tonga Stack	70	700	0	59
Birrier to Rivalee	28	121	0	10
Broad Stack to Stack of Barons Geo	40	unavailable	0	24
Burn of Garth to Broad Stack	536	unavailable	2	4
Burrakirk to the Keen	unavailable	24	0	0
Fugla Geo	2	unavailable	0	2
Geo of Vigon to Birrier	13	75	0	0
Greff to Ayre of Tonga	77	unavailable	0	79
Hermaness NNR	*23,661	unavailable	20	1,569
Hols Hellier	280	unavailable	2	92
Kame to Corbie Geo	92	unavailable	5	2
Landvillas to Scarfi Taing	846	unavailable	7	79
Norwick Herda	950	95	0	7
Rivvalee to Wester Lee of Gloup	193	unavailable	1	8
Scarfi Taing to Noup o' Noss	506	1600	36	130
Skitstack to Woodwick	66	44	1	8
Snarra Voe to The Keen	31	18	2	6
South Geo Brough to Greff	414	169	0	48
Stack o' da Noup to Kame	560	unavailable	8	71
Stack of Barons Geo to The Nev	117	unavailable	2	380
Sumburgh Head	502	unavailable	474	84
The Kame to Landvillas	788	unavailable	1	38
The Keen to Lunda Wick	4	unavailable	0	0
The Lug	700	unavailable	0	100
The Nev to The Kame	8	unavailable	9	78
Uyea	925	250	8	33
Virdick	625	unavailable	0	8
Wick of Collaster to Skitstack	53	20	0	11
Woodwick to South Geo Brough	unavailable	22	0	7
Total land count (if no land count, sea is used)	32,133		578	

Discussion

Our survey was not a complete census of the total Shetland Puffin population. However, the count sectors that we completed held 30% of the Puffin population of Shetland at the time of the last census. With the addition of the large colonies listed in Table 1 (Noss, Fair Isle and Foula), which were recently counted by Scottish Natural Heritage, Fair Isle Bird Observatory and Foula Ranger Service, respectively, we calculate recent counts have covered an area which held 90% of Shetland's Puffins during Seabird 2000.

Counting Puffins is challenging and this is especially true in the rugged terrain of Shetland. We used three methods to assess population change, all with different levels of certainty associated with them (Table 6). The most accurate way of assessing change in Puffin population size is through counts of AOBs. Our repeat count of AOBs at one such plot at Hermaness indicated a decline of 69% since 2002. All other counts were made of individual birds on land at a colony. Such counts can misrepresent the true population size by up to an order of magnitude because attendance changes with season, time of day, weather and due to the presence of predators (Walsh *et al.* 1995, Calvert & Robertson 2002). Therefore, these counts are only useful to indicate large population changes.

The site-specific method we repeated at the wider Hermaness site in June relies on such counts of individuals and these raw counts suggest a decline of 77%. Once the adjustment factor is applied, a smaller decline of 51% since 1997 or 42% since 2002 is indicated. However, the reliability of adjusting counts to provide a population estimate using an index of visible birds to AOBs across the wider site is untested. The use of separate adjustment factors for each five-minute interval assumes that the ratio of birds on land: AOB is reliable for the entire 8 km coastline on a five-minute basis. The size of our adjusted counts is more dependent on the magnitude of the five-minute adjustment factors than on the size of the raw counts themselves. This in itself is not of concern, if the adjustment factors are reliable but as they are highly variable (ranging from 0.625 to >11) and used to adjust counts up to 8km away, this may not be the case. In previous surveys the correction factors may have been less variable between the five-minute intervals since the calibration plot provided a larger sample size (150–210 AOBs). In the future, a larger calibration plot (more AOBs) may be helpful in reducing the variability in the adjustment factors.

Table 6. Direction and strength of evidence of population changes associated with three census methods used in Puffin counts in Shetland during 2017.

Census method	Result	Strength of evidence
Reference Plot count (Hermaness)	-69% since 2002 -79% since 1997	Strong evidence of decline since 1997 but in small area (<200 AOBs)
Hermaness-specific (June)	Adjusted estimates: -42% since 2002 -51% since 1997 Raw counts of birds on land: -77% since 1997	Medium evidence of decline using method consistent, but non-standard, method since 1997
Individuals on land at 29 count sectors (May)	Low overall numbers and 14 of 29 count sectors with no Puffins on land.	Suggestion of widespread decline, but survey months inconsistent between years.

All remaining sectors were counted using counts of individuals on land in May for which there is no directly comparable count in previous censuses (as they were done in June), though the broad scale differences to the Seabird 2000 counts were marked (Table 4). Some of the difference between Seabird 2000 and 2017 will be due to methodological differences, in particular whether non-breeders were included in the count. Harris (1984) estimated between 10 and 20% of the population comprises immatures during chick-rearing, based on age classes determined by bill grooves. Our 2017 counts at Hermaness suggested that the total number of birds on land and on the sea was four times larger in June (6,631) than in May (1,589) and the birds on land figure on its own was 179 times greater in June (3,588) than in May (20). On Noss, May and July counts were carried out in 1994, 1999 and 2000 and the July counts were respectively 1.8, 2.2 and 4.9 times greater than May counts (SNH unpublished data). Despite this uncertainty, the body of evidence presented here along with the 38%, 78% and 63% declines on, respectively, Noss, Foula (but note that counts here were made in different months) and Fair Isle (Table 1) support the suggestion that large declines are likely to be widespread across Shetland's Puffin colonies.

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Amendments to the *Scottish List*: species and subspecies

THE SCOTTISH BIRDS RECORDS COMMITTEE

In 1993, the Council of The Scottish Ornithologists' Club (SOC) delegated to the Scottish Birds Records Committee (SBRC) responsibility for producing a *Scottish List* and publishing regular amendments. The list was first published in 1994 and SBRC appointed a Subcommittee to maintain it; the current members are Dave Clugston, Ron Forrester, Angus Hogg, Bob McGowan, Chris McInerny and Roger Riddington.

SBRC established several principles for the original version of the *Scottish List*, which are still followed. The British Ornithologists' Union (BOU) has maintained the official *British List* since 1883 and SBRC adopts its taxonomy, sequence, scientific and English names and species categorization for the *Scottish List*.

The BOU Records Committee (BOURC) normally only adjudicates on the first British record for any taxon. Responsibility then lies with the British Birds Rarities Committee (BBRC) for acceptance of all subsequent records of rare species and subspecies in Britain. Similarly, SBRC is responsible for acceptance of records of species and subspecies which fall outside the remit of BBRC, but which remain rare in a Scottish context. Decisions by BOURC, BBRC and SBRC automatically apply to the *Scottish List*.

The *Scottish List* was most recently published in full in 2011, with annual updates from 2013 to 2017 (Forrester 2011, 2013, 2014, 2015, 2016 and 2017). Since then, there have been several publications that affect the *Scottish List*. BOURC has published its 47th and 48th Reports (BOU 2017, 2018b) and BOU has published 'The British List: a Checklist of British Birds (9th Edition)' (BOU 2018a). BBRC (Holt *et al.* 2017) and SBRC (McGowan & McInerny 2018) have both produced annual reports covering 2016.

The current version of the *Scottish List* in Excel format can be found on the SOC website at: www.the-soc.org.uk/bird-recording/the-scottish-list/

'The British List: A Checklist of British Birds (9th Edition)' - changes which affect the *Scottish List*

Last year (*Scottish Birds* 36: 200), we reported that BOURC had disbanded its own Taxonomic Subcommittee and were reviewing global taxonomies with a view to adopting one system for all BOU activities including the *British List*. With effect from 1 January 2018 BOU has adopted the International Ornithologists' Union's (IOU) *IOC World Bird List* (Gill & Donsker 2017) for all its taxonomic needs, including the *British List*. The 9th edition of the *British List* (BOU 2018b) incorporates these changes, which significantly affect the *Scottish List*.

Consequential upon the new taxonomy, there are changes to the species and subspecies appearing on the *Scottish List*:

Bean Goose *Anser fabalis* is treated as two species, both having occurred in Scotland - **Taiga Bean Goose** *Anser fabalis,* with subspecies *fabalis*, and **Tundra Bean Goose** *Anser serrirostris,* with subspecies *rossicus.*
Add one species to *Scottish List* **Category A.**

Gadwall *Mareca strepera* previously monotypic, now polytypic, with the nominate subspecies occurring in Scotland.

Pintail *Anas acuta* previously polytypic, with the nominate subspecies occurring in Scotland, now monotypic.

Glossy Ibis *Plegadis falcinellus* previously polytypic, with the nominate subspecies occurring in Scotland, now monotypic.

Green Heron *Butorides virescens* previously monotypic, now polytypic, with nominate subspecies 'likely' to have occurred in Scotland.

Cattle Egret *Bubulcus ibis* previously polytypic, with the nominate subspecies occurring in Scotland, now monotypic.

White-tailed Eagle *Haliaeetus albicilla* previously monotypic, now polytypic, with the nominate subspecies occurring in Scotland.

Crane *Grus grus* previously polytypic, with the nominate subspecies occurring in Scotland, now monotypic.

Black-winged Stilt *Himantopus himantopus* previously polytypic, with the nominate subspecies occurring in Scotland, now monotypic.

Grey Plover *Pluvialis squatarola*, previously monotypic, now polytypic, with the nominate subspecies occurring in Scotland.

Whimbrel *Numenius phaeopus* previously the nominate subspecies both bred in Scotland and occurred as a passage migrant from Scandinavia, Russia and Iceland, however the populations breeding in Scotland and Iceland now assigned to subspecies *islandicus*, which is added to the *Scottish List* in addition to the nominate subspecies.

Hudsonian Whimbrel, previously treated as a full species *Numenius hudsonicus*, now becomes a subspecies of **Whimbrel** *Numenius phaeopus hudsonicus.*
Remove one species from *Scottish List.*

Sanderling *Calidris alba*, previously monotypic, now polytypic, with the nominate subspecies occurring in Scotland.

Laughing Gull *Larus atricilla* previously monotypic, now polytypic, with subspecies occurring in Scotland undetermined.

American Herring Gull *Larus smithsonianus* previously polytypic, with the nominate subspecies occurring in Scotland, now monotypic.

Mourning Dove *Zenaida macroura*, with subspecies *carolinensis* 'likely' to have occurred in Scotland.

Red-backed Shrike *Lanius collurio*, previously polytypic, with nominate subspecies occurring in Scotland, now monotypic.

Isabelline Shrike *Lanius isabellinus* is treated as two species - **Daurian Shrike** *Lanius isabellinus* and **Turkestan Shrike** *Lanius phoenicuroides*. There are three subspecies of **Daurian Shirike** *Lanius isabellinus* with the nominate race *L. i. isabellinus* recorded in Scotland. Turkestan Shrike taxon *phoenicuroides* was removed from the *Scottish List* in 2011 (*Scottish Birds* 31: 9).

Southern Grey Shrike *Lanius meridionalis* previously appeared on the *Scottish List* due to acceptance of seven records of the subspecies *pallidirostris*. This taxon has now been promoted to species status *Lanius pallidirostris* with the English name **Steppe Grey Shrike**. It is monotypic.

Golden Oriole *Oriolus oriolus*, previously polytypic, with nominate subspecies occurring in Scotland, now monotypic.

Bimaculated Lark *Melanocorypha bimaculata*, previously polytypic, with nominate subspecies occurring in Scotland, now monotypic.

Arctic Warbler *Phylloscopus borealis* previously monotypic, now polytypic, with nominate subspecies 'likely' to have occurred in Scotland.

Paddyfield Warbler *Acrocephalus agricola*, with subspecies *septimus* 'likely' to have occurred in Scotland.

White's Thrush *Zoothera dauma* becomes *Zoothera aurea*, with subspecies occurring in Scotland continuing as *aurea*.

Hermit Thrush *Catharus guttatus*, with subspecies *faxoni* 'likely' to have occurred in Scotland.

Siberian Blue Robin *Larvivora cyane*, with subspecies *bochaiensis* 'likely' to have occurred in Scotland.

Siberian Rubythroat *Calliope calliope*, with nominate subspecies 'likely' to have occurred in Scotland.

Black Redstart *Phoenicurus ochruros*, with subspecies *xerophilus* removed from 'Eastern' subspecies.

Yellow Wagtail *Motacilla flava* is now treated as two species. **Western Yellow Wagtail** *Motacilla flava* with subspecies *flava, flavissima, thunbergi* and *feldegg* on the *Scottish List* and **Eastern Yellow Wagtail** *Motacilla tschutschensis* with subspecies undetermined. The vernacular name for Western Yellow Wagtail remains Yellow Wagtail.
Add one species to *Scottish List* Category A.

Citrine Wagtail *Motacilla citreola*, with nominate subspecies occurring in Scotland.

Tawny Pipit *Anthus campestris*, previously polytypic, with nominate subspecies occurring in Scotland, now monotypic.

Meadow Pipit *Anthus pratensis*, previously polytypic, with subspecies *pratensis* and *whistleri* occurring in Scotland, now monotypic.

Wilson's Warbler *Cardellina pusilla*, with nominate subspecies 'likely' to have occurred in Scotland.

Rustic Bunting *Emberiza rustica*, previously polytypic, with nominate subspecies occurring in Scotland, now monotypic.

White-crowned Sparrow *Zonotrichia leucophrys*, with nominate subspecies 'likely' to have occurred in Scotland.

Genus reassignments:

Garganey, Blue-winged Teal and **Shoveler**, previously in the genus *Anas*, now transferred to *Spatula*.

Gadwall, Wigeon and **American Wigeon**, previously in the genus *Anas*, now transferred to *Mareca*.

Black Grouse previously in the genus *Tetrao*, now transferred to *Lyrurus*.

Sooty Shearwater and **Great Shearwater**, previously in the genus *Puffinus*, now transferred to *Ardenna*.

Little Crake and **Baillon's Crake**, previously in the genus *Zapornia*, now transferred to *Porzana*.

Sandhill Crane, previously in the genus *Grus*, now transferred to *Antigone*.

Kentish Plover, Greater Sand Plover, Lesser Sand Plover and **Caspian Plover**, previously in the genus *Anarhynchus*, now transferred to *Charadrius*.

Laughing Gull and **Franklin's Gull**, previously in the genus *Larus*, now transferred to *Leucophaeus*.

Mediterranean Gull, previously in the Genus *Larus*, now transferred to *Ichthyaetus*.

Royal Tern, Lesser Crested Tern and **Sandwich Tern**, previously in the genus *Sterna*, now transferred to *Thalasseus*. Royal Tern *Sterna maxima* becomes *T. maximus*.

Jackdaw, previously in the genus *Corvus*, now transferred to *Coloeus*.

Common Rosefinch, previously in the genus *Erythrina*, now transferred to *Carpodacus*.

Tennessee Warbler previously in the genus *Oreothlypis* now transferred to *Leiothlypis*.

Species with scientific name adjustments:

Willow Tit *Poecile montana* becomes *P. montanus*

Rüppell's Warbler *Sylvia rueppelli* becomes *S. ruppeli*

Yellow Warbler *Setophaga petechia* becomes *S. aestiva*

Subspecies with scientific name adjustments:

The American race of **Red-necked Grebe** *Podiceps grisegena* previously *holboellii* now *holbollii*.

English vernacular name changes:

Frigate Petrel *Pelagodroma marina* becomes White-faced Storm Petrel

Macaronesian Shearwater *Puffinus baroli* becomes Barolo Shearwater

Rufous Turtle Dove *Streptopelia orientalis* becomes Oriental Turtle Dove

Brown Flycatcher *Muscicapa dauurica* becomes Asian Brown Flycatcher

In addition, there are changes to the taxonomic order - too numerous to itemise here. All changes are incorporated into the current version of the *Scottish List* that appears on the SOC website at: www.the-soc.org.uk/bird-recording/the-scottish-list/

BOURC decisions affecting the *Scottish List* (BOU 2017, 2018b)

Eastern Kingbird *Tyrannus tyrannus*

2016 Outer Hebrides Eòlaigearraidh (Eoligarry), Barra, 2CY+, 29–30 September, photo (A. McPhillips, C.R. Saunders *et al.*); presumed same, Bornais (Bornish), South Uist, 2CY+, 2 October, photo (M. Forrest *et al.*) (*Ibis* 160: 241–242; *British Birds* 110: 593, plate 321; *Scottish Birds* 36: 360–362, plates 323–325).

Add to *Scottish List* Category A.

Subalpine Warbler *Sylvia cantillans*

'Eastern Subalpine Warbler' *S. c. cantillans*

2014 Fair Isle male, 8 May 2014, photo, trapped, DNA analysis (D. Parnaby *et al.*). This is the first established record of this subspecies for Scotland and Britain (*Ibis* 159: 925).

Add subspecies to *Scottish List.*

Siberian Accentor *Prunella montanella*

2016 Shetland Mossy Hill, Scousburgh, Mainland, 1CY, 9–10 October, photo (H.R. Harrop, J.P. Hunt *et al.*) (*Ibis* 159: 926; *British Birds* 110: 618; *Scottish Birds* 37: 180–184, plates 142–146).

Add species to *Scottish List* Category A.

Chestnut Bunting *Emberiza rutila*

2015 Orkney Papa Westray, 1CY male, 19–29 October, photo (J. Branscombe, M. Schott *et al.*) (*Ibis* 159: 926; *British Birds* 108: plate 436, 110: 626, plate 349, 111: 157–163, plates 105–109; *Scottish Birds* 36: 52–55, plates 62–64).

Add species to *Scottish List* Category A.

Wood Duck *Aix sponsa*

Four records, all from Scotland, were assessed. Whilst the identification was established for all four birds, and there is now compelling evidence that this species can cross the Atlantic, their origin was unclear. The species has now been moved from Category E to Category D.

BBRC decisions which affect the *Scottish List*

Iceland Gull ('Thayer's Gull') *Larus glaucoides thayeri*

2014 Argyll Gartbreck and Bruichladdich, Islay, 2CY, 27 February to 25 April, photo (A. Cross, K. Gibb, S. Jacques, D. Morrison, M.A. Wilkinson *et al.*) (*British Birds* 110: 589).

Add subspecies to *Scottish List.*

Green Warbler *Phylloscopus nitidus*

2014 Shetland Foula, 2CY+, 31 May to 4 June, photo (D. & G. Atherton) (*British Birds* 110: 598).

2016 Shetland Baltasound, Unst, 2CY+, 12–15 May, trapped, photo, DNA analysis (D. Cooper, M.G. Pennington, B.H. Thomason *et al.*) (*British Birds* 109: plate 243; 110: 598, plate 328).

Add to *Scottish List* Category A.

Two-barred Greenish Warbler *Phylloscopus plumbeitarsus*

2016 Orkney Papa Westray, 1CY, 9 October, photo (D. Roche *et al.*) (*British Birds* 110: 599, plate 329).

Add to *Scottish List.* Category A.

Reed Warbler ('Caspian Reed Warbler') *Acrocephalus scirpaceus fuscus*

2012 Shetland Kergord, Mainland, 1CY, 4–5 November, trapped, photo, DNA analysis (P.V. Harvey, R. Riddington, R.M. Tallack *et al.*) (*British Birds* 110: 605, plates 4–5).

Add subspecies to *Scottish List.*

Western Orphean Warbler *Sylvia hortensis* (2)

2016 Shetland Loch of Benston, Mainland, 1CY+, 6 October, photo (P. Churton, G. Maclean, C. Wilkinson *et al. per* Shetland Recorder) (*British Birds* 110: 601, plate 330; *Scottish Birds* 37: 75–78, plates 47–49).

2016 Orkney Finstown, Mainland, 1CY, 18–21 October, trapped, photo (S.J. Williams *et al.*) (*British Birds* 110: 601; *Scottish Birds* 37: 75–78, plates 50–52).

A 1982 record from Aberdeen of either a Western Orphean Warbler or Eastern Orphean Warbler *S. crassirostris* could not be assigned to either species.

Add to *Scottish List* Category A.

Black Redstart *Phoenicurus ochruros*

'Eastern Black Redstart' *Phoenicurus ochruros phoenicuroides/rufiventris/xerophilus*

2016 Lothian Torness, 1CY male, 2–22 December, photo (M. Griffin, J. McInnes, G. Morgan *et al.*) (*British Birds* 110: 612; *Scottish Birds* 37: 174–176, plates 135–138).

Add subspecies group to *Scottish List.*

Scarlet Tanager *Piranga olivacea*

2014 Outer Hebrides Brèibhig (Brevig), Barra, 1CY female, 6–9 October, trapped, photo (K. Gillon *et al.*) (*British Birds* 108: 626, plate 372; *Scottish Birds* 35: 82–84, plates 73–76). This record was inadvertently missed from our 2016 report.

Add to *Scottish List* Category A.

'Azorean Yellow-legged Gull' *Larus michahellis atlantis*

Along with two other records, BBRC accepted a record of a near-adult 'Azorean Yellow-legged Gull' *Larus michahellis atlantis* found on Barra on 10 September 2005. The three records were forwarded as a batch to BOURC for consideration for admission to the *British List*. BOURC considered that uncertainty existed over a few features of the Barra bird and accepted a 2008 record from Cornwall, which was accompanied by a long series of excellent photographs, as the first British record (Stoddart & McInerny 2017, BOU 2017). Although the Barra record has been accepted by BBRC, because we follow BOURC in all respects, we are unable to add this subspecies to the *Scottish List* since the Barra record predates the first British record. The first acceptable Scottish record is still awaited.

SBRC *Scottish List* subcommittee decisions which affect the *Scottish List*

Ringed Plover *Charadrius hiaticula*

Add subspecies *psammodromus* with status code PM.

Ring-necked Parakeet *Psittacula krameri*

For many years this species has remained in Category E of the *Scottish List,* with all records assumed to be escapes. However, the first sign of status change was in 2016 when up to three birds first appeared in Victoria Park, Glasgow (Clyde) and a nest hole was occupied (McInerny 2016). Breeding was confirmed in 2017 when in June three young were observed with three adults (McInerny 2017). In January 2018, no fewer than 19 birds were seen in one tree (McInerny in press), with consequently additional breeding suspected to have occurred nearby. Birds are forming a winter roost, as has been observed elsewhere in the UK. It appears most likely that these birds derive from the expanding English population and so the species has been accepted to Category C5 (*vagrant naturalized species* - species from established naturalized populations abroad).

Add to *Scottish List* Category C5.

Lapland Bunting *Calcarius lapponicus*

Add subspecies *subcalcaratus* with status codes PM WV.

Scottish List category totals

As a result of the above changes the *Scottish List*, category totals are now:

Category A	520
Category B	6
Category C	9
Total	**535**
Category D	10

Acknowledgements

We would like to thank Chris McInerny, Secretary of The British Ornithologists' Union Records Committee, and the BOU, for very kindly making available an advanced copy of the 9th edition of the *British List* to the *Scottish List* subcommittee, which enabled progress on this paper to commence six months earlier than would otherwise have been the case.

The *Scottish List* - on SOC website

Due to the frequency of changes to the *Scottish List*, it is considered inappropriate to produce regular printed versions that quickly become out of date. The *Scottish List* does however appear on the SOC website, in a convenient Excel format, where it is updated annually and can be 'downloaded'. It is found at: www.the-soc.org.uk/bird-recording/the-scottish-list/

Records of species and subspecies recorded in Scotland on up to 20 occasions

Comprehensive lists of all records of species and subspecies recorded in Scotland on up to 20 occasions now appear on the SOC's website in tabulated form (www.the-soc.org.uk/bird-recording/scottish-birds-records-committee-sbrc/records-of-species-and-subspecies-recorded-in-scotland-on-up-to-20-occasions). The lists are updated annually.

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Long-tailed Duck eating fish

Cramp & Simmons (1977) note the winter prey of Long-tailed Duck *Clangula hyemalis* as mainly small molluscs and crustaceans with some small fish. Fish such as gobies, sticklebacks, Cod and flatfish are mentioned. The bird in Plate 186 was photographed off the sea wall at Musselburgh near the mouth of the River Esk on 1 January 2018. In many years' experience of watching these ducks at this site, I have never seen one with a fish as in the photograph. Perhaps smaller fish are swallowed quickly.

Professor Peter Maitland has commented. "An interesting photo but unfortunately not sufficiently clear to show the diagnostic salmonoid feature - the small adipose fin on the back between the dorsal fin and the tail. However, I believe the Sparling *Osmerus eperlanus* is the likeliest contender due to the size, the shape and fineness of the tail, the body shape and colour and that slightly translucent appearance of the skin. The fact that this occurred near a river mouth in January also points to Sparling as these fish move to spawn in fresh water about that time. I don't think it is a Greater Sand Eel *Hyperoplus lanceolatus* as has also been suggested (on Twitter) - it is too short and wide in the body."

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Plate 186. Long-tailed Duck, Musselburgh, Lothian, I January 2018. © *Ian Andrews*

Peregrine hunting Water Voles in Glasgow

While watching Water Voles *Arvicola amphibius* in the east end of Glasgow (Clyde) on 28 March 2018, I was astonished to observe a Peregrine *Falco peregrinus* attempting to catch a vole as prey.

The Water Vole (Plates 187–188) is a rare mammal throughout Scotland and the UK with numbers suffering severe declines due to changes in agricultural practices and through predation by introduced American Mink *Neovison vison* (Rushton *et al.* 2000, Strachan 2004). Thus the colonies in east Glasgow, where large numbers are found, are of national importance, and are unusual in being present in urban grasslands far from water, with the voles having a fossorial lifestyle, digging holes and living underground (Stewart *et al.* 2017). At the site shown in Plate 189, up to 20 Water Voles inhabit a grassy slope about 1.5 hectares in size, with the slope located in a public park surrounded by roads and housing estates, and the nearest water bodies around 2 km distant. Most of the voles have black fur (Plates 187–188), with a few brown.

Peregrines are restricted in range in Scotland, though numbers of the raptor have increased in urban locations such as Glasgow, with birds nesting in suitable ledges on buildings and feeding on urban fauna including Feral Pigeons *Columba livia* (Forrester *et al.* 2007). However, prey items, mostly birds, are usually caught in flight by stoop dives, with mammals and other fauna only taken 'occasionally' (Cramp 1985, del Hoyo *et al.* 1994).

Hence the observation of a Peregrine attempting to catch a Water Vole on land is highly unusual, possibly unprecedented. The species is not listed as a prey item in Cramp (1985), although other voles of the genera *Arvicola* and *Microtus* are mentioned. However, Water Voles have been recorded from a Peregrine nest in Cumbria, with the remains of three found between 1928 and 1934 (Ratcliffe 1993).

During the hunting attempt in east Glasgow, the Peregrine flew in low and landed next to a burrow hole where a black Water Vole had been present moments before, but the vole had anticipated the attack and disappeared underground. Being black many of the voles are prominent while on the surface of the grassland slope (Plates 187–89), and would be visible to Peregrines which perch on tower

Plates 187–188. Water Voles, Glasgow, Clyde, March 2018. Both these individuals have black fur; smaller numbers of brown individuals also occur. © *Chris McInerny*

Plate 189. Water Vole colony, Glasgow, Clyde, March 2018. About 20 animals inhabit the grass bank in a public park, which is south facing and about 1.5 hectares in size; many burrows are apparent. Most voles have black fur but about four are brown; up to 12 have been seen on the surface next to burrow holes eating grass at any one time. Arrow indicates a Water Vole. Peregrines have been observed perching on the tower blocks behind the bank. © *Chris McInerny*

blocks next to the park (Plate 189). Apparently such hunting behaviour is regular at the site, with local people living nearby having witnessed it on a number of occasions, especially when young voles are present. Considering the large numbers of Water Voles throughout east Glasgow it is possible that they form a significant part of the raptor's diet. Perhaps less surprisingly, hunting of Water Voles by Kestrel *F. tinnunculus* and Buzzard *Buteo buteo* has also been observed at this site and elsewhere in east Glasgow.

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LETTER: Golden Eagles and Meadow Pipits

Although Brain & Insley (2018) could only find one published reference to Meadow Pipits *Anthus pratensis* as Golden Eagle *Aquila chrysaetos* prey, Watson (2010) notes 'pipits' as prey in all parts except his Region 8 (the East Highlands), with them forming 2% of the recorded eagle diet in his Region 5 (North-west Highlands) from where the note originates. While Golden Eagles may be more associated with prey such as Mountain Hare *Lepus timidis* and Red Grouse *Lagopus lagopus*, the use of voles, larks, pipits and thrushes is not unusual. In northern England, for example, I recorded roughly 33 small items per successful breeding season, of which about 10 were Meadow Pipits.

In my experience, small prey is mostly taken by eagles when larger items are difficult to obtain, and mostly occurs in June. I have described eagles hunting for pipit nests and apparently 'farming' Ring Ouzels *Turdus torquatus* (taking the chicks singly over several hours), apparently to placate the eaglet at such times (Walker 2009). I have also suggested that this may be a form of displacement behaviour (Walker 2017). As Brain & Insley do not know which was delivered first, the Mountain Hare, the Red Grouse or the pipits, this may have been what happened at their nest.

What is present on the nest when eaglets are ringed is also not necessarily a reliable indication of food availability. In one year, the only prey in a north Argyll nest (in Watson's Region 6) at ringing time was Meadow Pipit and Fox *Vulpes vulpes* cub but Red Deer *Cervus elaphus* calves and Ptarmigan *Lagopus muta* were clearly available. Small prey was recorded on Kintyre (in Watson's Region 7) when detailed surveys indicated that Red Grouse and Rabbit *Oryctolagus cuniculus* were plentiful (Walker 2017).

Although Brain & Insley conclude that their record supports the assertion that live prey may be limited in that region, one record is insufficient evidence on which to reach conclusions about food availability; the simultaneous presence of hare and grouse on the nest also suggests otherwise. In my experience, most pipits are recorded as eagle prey during lengthy observation sessions, not when visiting nests.

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82nd SOC Annual General Meeting
27th October 2018, 5.00pm
Conference Centre, Macdonald Aviemore Resort

For an up-to-date agenda and details of Council's proposal to make temporary amendments to the Club's Constitution, please see the 2017/18 SOC Annual Report (enclosed with this issue of *Scottish Birds*).

Or visit the AGM page online:
www.the-soc.org.uk/support-us/events/soc-82nd-annual-general-meeting
Here you will also find useful links to the full annual accounts and a copy of the current SOC Constitution

Christopher Kenneth Mylne (1927–2018)

Plate 190. Chris Mylne, Boreray, St Kilda, Outer Hebrides, May 2011. © *Leo du Feu*

Chris Mylne was born in Midlothian where his father was headmaster of a private school at Dalhousie Castle. Chris initially followed a similar path. He was sent to Sedbergh boarding school where he flourished academically, was less keen on sport and became interested in birdlife on the Yorkshire fells. He survived meningitis, did National Service in the Royal Signals, studied English at Cambridge University, where he was president of the bird club and visited Utsira in Norway to study migration. After graduation in 1951 and a Diploma in Education from Edinburgh in 1952 he taught in John Watson's School in Edinburgh. In 1954, he answered an advert for the post of sole teacher - and lay missionary - on Foula. His 18 months on the least-visited of the Shetland Islands were to prove life changing for him. He made longstanding friendships with islanders as well as developing his ornithological interests though he encountered some opposition when he asked locals to stop eating skua eggs. He made a short documentary film about the birds of Foula and, when a recurring ulcer forced him to leave the island to be nearer a hospital, he embarked on a career making films, initially for the RSPB, then as a freelance. In all he made over 40 films on Scotland and its wildlife, notably islands such as St Kilda, Fair Isle and Rum, birds and nature conservation. He also did a lot of still photography and lecturing, including on National Trust for Scotland cruises. He became a prominent figure in relevant organisations such as the Scottish Wildlife Trust for which he worked on publicity, RSPB Scotland, the National Trust for Scotland, the St Kilda Club and the SOC where his talks and films were popular features at meetings and conferences. Copies of some are in the library at Waterston House. He served on SOC Council from 1964 to 1967. He also wrote a checklist of the birds of Foula and contributed several notes to *Scottish Birds*. He was also involved with animal welfare charities, including the St Andrews Animal Fund and Advocates for Animals (now Onekind), and in environmental organisations particularly Friends of the Earth Scotland.

By the 1980s, he had reduced his involvement with many of these organisations but his interest in natural history continued throughout his long life. He lived in Linlithgow (West Lothian) for many years and was particularly fond of the local loch and its bird life as well as the coastline at nearby Blackness. He always enjoyed introducing new people to these places and the fascinating experiences to be found there such as the courtship weed dance of the Great Crested Grebes on the loch. He returned to Foula on several occasions and in 2011 published an illustrated account *Foula the Time of my Life*. On a more personal note, he was married twice, to Margaret (with whom he had two sons) and then to Judith.

The editors assisted by Andrew Mylne

Clifford Henty (1934–2018)

Cliff Henty was one of several enthusiastic ornithologists active on the English south coast in the 1950s who came to be known as the 'Portsmouth group'. He was a behavioural ecologist and studied under Niko Tinbergen, the pioneer in this field. His academic work took him north from Oxford to the Psychology Department at Stirling University. In the early 1970s, the University, with Dave Bryant, Cliff, and some of the PhD students, such as Dave Waugh, Martin Davies and Angela Turner, was very much a centre of ornithological and birding activity. Cliff always appeared an *eminence gris,* the man who could be relied upon to ask the scientifically intelligent question of the guest speaker at the then Stirling branch evenings, and the man the branch committee sought advice from in designing the surveys for its 'Birds of the River Devon' project. He was quiet but in conversation his deep interest in, his analytical approach to and knowledge of ornithology immediately became apparent. He was both one to consult or just to talk to as a friend. In conversation, he would impart knowledge often with his own questions and invariably with a smile. When the branch went on its 'Argyll weekends' (from at least 1976) Cliff would be sprawled in the front passenger seat, finding room for his long legs by resting his feet against the windscreen, while entertaining us with lengthy recitations of comic verse - much of it garnered from the writings of that multi-talented Scottish ornithologist from an earlier era, Professor Maury Meiklejohn. Cliff's sense of humour could also manifest in bursts of raucous laughter whenever something tweaked his mental funny-bone. Often too, there would be reminiscences of his early days in Sussex, and of the notable local birdmen there of earlier generations. His skills as an observer of human nature were more than matched by his skills and patience as an avian observer: from his published studies of Song Thrush snail smashing, food hiding by Jackdaws and Magpies at Doñana, Snow Bunting feeding behaviour in winter on the Ochils, to acquiring recognition skills of a full range of species gained over a lifetime of observations and note taking. He was stirred by early, quirky approaches to migration, most notably resurrecting moonwatching for observing night-time movements over his then-home in Alva by the Ochil Hills. He also spent much time on strategic high points in central Scotland as an early and enthusiastic vismig recorder. Cliff had identified the Mull of Galloway as a mainland site with potential for visible migration, and he used to drive down on suitable weekends in autumn in his VW campervan to make observations, often with one or two students, whom he had enthused. One student - Mark Brazil - went on to produce the definitive *The Birds of Japan.* Cliff later went to the tip of Cherbourg peninsula in spring to report on the little-known northward passage of seabirds.

Plate 191. Cliff Henty. © *Photographer unknown*

He often drew inspiration from earlier 'greats'. Notably, he reworked in the 1970s the Perthshire Naturalist's (Charles Mcintosh) 1905 survey of the birds of Strathbraan. This, and his store of birding and apt literary quotes, made him the best companion to have in the field. One fond memory is when in the early 1990s we followed up inconclusive sightings of Honey-buzzard by the late Bill Brackenridge in 'a forest in central Scotland'. Our several long walks to and from our selected vantage point, in the heat and flies, were rewarded by regular sightings, and once with a fine 'butterfly' display from one of the birds.

Cliff would occasionally invite a friend to join him on local expeditions, usually to investigate some report that he had received as SOC local recorder. We recall us not finding an Icterine Warbler in Glen Lochay or a Black-eared Wheatear somewhere along the Forth below Cambus - neither failure being to Cliff's great surprise. His editorship of the Upper Forth Bird Report was meticulous and instructive. He was an early advocate of the importance of systematic recording of commoner species especially as a counterweight to the preference of most birders to seek the scarce or rare. He practised what he preached as the author of, and contributor to, many surveys of farmland and woodland birds in the 1970s and 1980s.

Much closer to the present, Neil Bielby and his working group behind *The Birds of Clackmannanshire* availed themselves of his knowledge of the historical changes in the local avifauna again thanks to his 34-year stint as local recorder. He hung up his spreadsheets (but not his binoculars) in 2008. He was also an essential member of the editorial team who wrote up the bird report in *Forth Naturalist and Historian*. He represented both SOC and BTO on the Clackmannan Biodiversity Group and was an active member of the local SWT group.

A last outing with Cliff was in 2015 to Kinneil on the upper Forth. He was beginning to lose mobility but was still the same Cliff to talk to and so it was pleasing that our short stroll along the sea bank was blessed with a close fly-past by from an adult Mediterranean Gull.

At a SOC anniversary celebration, a group of us were admiring portraits of bygone pioneers of Scottish ornithology. "They don't build them like that nowadays" was Cliff's observation. True, each was unique. But so was Cliff Henty, and he can stand alongside them all.

David Bryant, John Crook, Sandy Mitchell, Geoff Shaw & David Thorogood

Cliff provided much sage advice throughout the writing of the current avifauna (published in 2013).

Plate 192. You might like to come up with your own caption to this photograph. One suggestion is The Raven's response to the cull - "the answer my friend is blowing in the wind!" The Oa, Islay, March 2018. © *Ian Andrews*

An Unkindness to Ravens?

S. DA PRATO

Many conservationists and birders think the collective noun sometimes applied to this bird should be changed to an *Unkindness to Ravens* following Scottish Natural Heritage's controversial decision to license the killing of 300 of the birds in the Strathbraan area of Perth and Kinross over a five-year period. The licence has been issued to a consortium, the Strathbraan Community Collaboration for Waders, which, according to the licence application, *"represents some of the local land management (farmers, gamekeepers) and private interests in the area. Technical advice and support, notably data gathering and interpretation, is being provided by the Game & Wildlife Conservation Trust."* The consortium's view that interventions to promote waders can be privately funded may also have been attractive to a cash strapped SNH.

According to SNH, the 'limited trial' will explore whether the reduction in Ravens will help populations of ground-nesting birds to recover. SNH also say *"Research tells us that the important factors in these declines are loss of habitat to provide food and cover for nesting, and predation. The evidence for this was comprehensively compiled and analyzed by the Understanding Predation project in 2016 and set out in their report. While further research and studies are always welcome …, we consider that we have sufficient evidence to take practical action now and to initiate trials on the ground."*

However, there are few studies that looked specifically at the impacts of Ravens on wading birds. One that did so was published in the *Journal of Animal Ecology* in March 2010 by Arjun Amar and

colleagues. They concluded that: *"Our study found no significant negative associations between raven abundance and population changes in upland waders, and so does not provide support to justify granting of licences for the lethal control of ravens in the interest of population-level conservation of these upland wader species. However, the near significant negative associations with lapwing and curlew merit further investigation. This study emphasizes the importance of making a thorough evaluation of the evidence base before making decisions regarding predator control."* In 2011, *Scottish Birds* published *Numbers and breeding success of Golden Plover and Dunlin in an area frequented by Ravens* by Robert Rae, Ewan Weston and Ed Duthie who in 2011 surveyed an area in North-east Scotland and found no decline in numbers of these two species since comparable surveys in the 1990s and that breeding success was high.

The SNH decision prompted an outcry from many conservationists. Some have suggested the move is about protecting Red Grouse, rather than waders. The area is one where six satellite-tagged eagles have disappeared in recent years. An illegal clam trap was found in November 2012, while a Buzzard was spring-trapped in January 2012. A Red Kite was found poisoned in January 2015. A Raven was poisoned in 2017. In addition, licensed raptor study group members have noted a number of cases of suspicious failure of nesting attempts by Hen Harrier, Red Kite and Buzzard across the area. They have also recorded a higher than usual turnover of Red Kites and a loss of breeding pairs at nearby sites. All of which indicates on-going illegal persecution.

Television presenter and BTO president Chris Packham has written to SNH's chairman saying its reputation lies in 'bloodied tatters.' RSPB Scotland says the Ravens are being demonised for wader declines and that the cull should be stopped at least until a full scientific assessment has been carried out. Details of how the 'study' will be monitored are lacking and there does not appear to be a control area where no culling takes place for comparison. A further concern is the lack of consultation. One would expect groups like RSPB and SRSG should have been consulted on the licence and involved in its design alongside the land owners and game keepers.

A petition against the cull had nearly reached its target of 180,000 by early July. SNH chairman, Mike Cantlay, received a huge volume of complaints, many pointing out the damage to Scotland's reputation for wildlife tourism, something that should trouble the former head of Visit Scotland. A somewhat beleaguered SNH has instructed its Scientific Advisory Committee to review the trial but the licence has not been revoked. They point out that to kill up to 69 Ravens in the first year is less than 0.5% of the total Raven numbers in Scotland, and it is already possible to cull Ravens on your land if you can supply evidence they are causing serious damage to livestock. They also claim "that RSPB kills more Hooded Crows in a year than we have given a licence for Ravens in this case."

In order to fund a judicial review of the SNH decision The Scottish Raptor Study Group launched a crowdfunding appeal which closed in early June at £26,000 contributed to by over 1,000 individuals.

Stan da Prato.
Email: standaprato@talktalk.net

As this issue went to print SNH halted the cull following its Scientific Advisory Committee's conclusion "that further work on quantifying the impact of predators on wader populations is desirable, However, members were unanimous that the trial methods are inadequate and will fail to provide any meaningful scientific evidence for or against any effect of culling Ravens on wader populations".

More detailed information than you will get in the mainstream media regularly appears on the Raptor Persecution UK website; I also found Isla Hodgsons' piece on her* Hidden Nature *site** thoughtful and informative.*

* raptorpersecutionscotland.wordpress.com
** wherethewildthingslive.co.uk/2018/05/01/some-thoughts-on-snh-and-the-strathbraan-raven-license

LETTER: Oystercatchers nesting on and near houses

With reference to the article on Oystercatchers nesting in a cemetery near Dumfries, *Scottish Birds* December 2017. Oystercatchers nest here at Inchmarlo Continuing Care Community near Banchory in Aberdeenshire. We have lived here for the past 13 years. Every year 2–3 pairs nest in the grounds usually on narrow gravel strips along the sides of the bungalows, but also in the flower pots and for the last two years in a gutter! In 2016, the birds sat through snow, gales and torrential rain which caused large volumes of water to pour from roofs into the gutter where they nest. It was remarkable it did not wash the nest out but they hatched three chicks only to have them predated by Herring Gulls. In 2017, the weather was better , they again hatched three chicks but these were predated possbly by cats. Other ground or pot nesting pairs occasionally manage to raise one or two young to fledgling, but most are predated. Two of the three hatched in the flower pot were successful but one was run over. The birds show almost no fear of people. They are very protective of their nests and young. Some less tolerant home owners on the estate don't like them because them often roost in the porches and defecate on doorsteps. The birds sometimes jump up on to window ledges to tap on the windows or on car windscreens and mirrors.

Richard & Margaret Cinderey,
32 Pinefield, Inchmarlo, Banchory AB31 4AF.

Plates 193–196. Oystercatcher nests and chicks, Inchmarlo, North-east Scotland. © *Inchmarlo residents*

Plate 197. Oystercatcher wall nest at Crinan, Argyll, June 2018. © *Jimmy Maxwell*

Oystercatcher – bird of the people

J. MAXWELL

The previous note on the flowerpot-nesting Oystercatchers at Banchory illustrates just how ingenious this species can be when choosing nest sites in a whole variety of situations. It reminds me of a visit we made to the old harbour at Crinan, Argyll in July 2018, where we came across this bird (Plate 197) nesting in a planter on the front wall of a house just above the shore. From its attitude on the nest I guessed that its young had hatched and it was scolding every passerby with an incredibly loud piping. When we returned a day later, the incessant piping was coming from the shore to which the chicks had obviously been led to allow them to merge with the usual seaweed and litter. The Banchory note recorded much predation of the chicks there and I couldn't help wondering why this species in my experience always advertises its family's whereabouts so loudly when it senses any danger. Across the harbour, you could make out several almost fully-grown Grey Heron young standing on the nests of a small colony - knowing this species' aptitude for predating any vulnerable bird, fish or mammal, I didn't expect the Oystercatcher chicks to last very long. However, the boatmen that was to ferry us over to Jura assured us that this unusual nesting site was used every year and in fact was a favourite attraction for visitors to the area.

Plate 198. Oystercatcher nest and eggs, Coulter Reservoir, Clyde, June 2009. © *Jimmy Maxwell*

Plates 199–200. A rocky nest site, Scalasaig, Colonsay, May 2015. © *Jimmy Maxwell*

Oystercatchers often choose the cover of rocks safely above the water levels as in this situation at Coulter Reservoir, Clyde (Plate 198) Personally, I find the surround of algae colours and plant growth, when contrasted with the smooth perfection of the eggs, a thing of great beauty and I still feel that same surge of excitement at finding the nest in the first place, as I did as a child. This nest at Scalasaig, Colonsay (Plate 199) also uses the security of rocks, in this case on the shore above the slipway. The following general shot teases the viewer to locate the bird guarding the nest, its head just showing, in such camouflage surroundings (Plate 200). In contrast, birds occasionally select a totally plain site to nest, as in this example which lay just in front of the Eric Morecambe Hide at RSPB Leighton Moss reserve in Lancashire. Here the surround is an area of flat dried up mud with only a few straws gathered to hold the clutch (Plate 201) - it seemed to me that its eggs must have been quite vulnerable to any passing Fox or other predator.

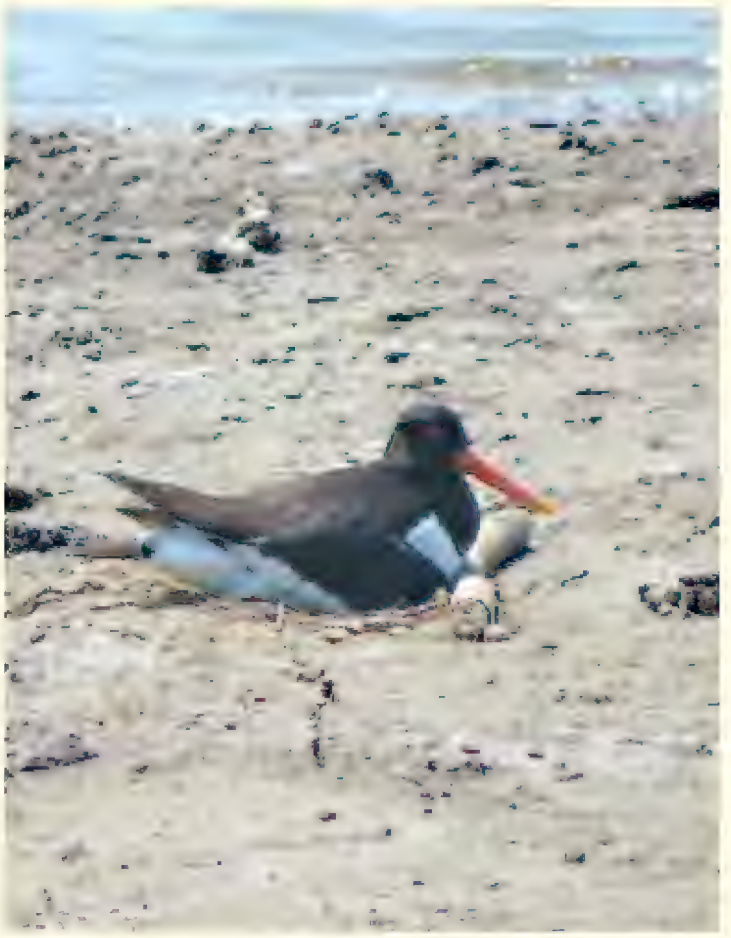


Plate 201. An open nest site, Leighton Moss, Lancashire, June 2016. © *Jimmy Maxwell*

Plate 202. Nest in a caravan site, Benderloch, near Oban, Argyll, May 2012. © *Jimmy Maxwell*

Jimmy Maxwell

The typical Oystercatcher nest however is usually on shingle. Although most birds will choose a river gravel bank or a pebbly seashore for their nest, this propensity often tempts the birds to choose man-made sites such as rooftops, factory waste areas and even traffic roundabouts. In this last example, at a caravan site in Benderloch, near Oban, where all the vans are neatly situated in gravel squares, an Oystercatcher moved in to nest and seems quite oblivious to all the busy comings and goings in such a place (Plate 202).

In our birdwatching world, I think we should be grateful that a beautiful bird such as the Oystercatcher should provide the general population with such an easily recognisable example from within our avian world (Plate 203). Dazzling in black and white contrast with that orange-red beak and blood-red eye, engagingly noisy, and as we have seen, liable to be nesting often in full public view. What better representative of the natural world could there be to generate attention, interest and also admiration - and hopefully light the occasional birdwatching spark?

Plate 203. Oystercatcher, Aboyne, North-east Scotland, May 2017. © *Harry Scott*

NEWS AND NOTICES

New Members

Ayrshire: Ms K. Ward, **Borders:** Mr D. Galbraith, Mrs H. Lowther, Mr & Mrs D. Scowen, Miss P. Slater, **Central Scotland:** Mr A. Bates & Ms K. Clapperton, **Clyde:** Miss L. Dunn, Mr S. Malzer, Mr R. Millar, Mr D. Stone, Mr T. Thorpe, **England, Wales & NI:** Mr & Mrs P. Cheesley, Mr N. Forsyth, Mr & Mrs J. Keville, **Fife:** Ms Y. Austen, Ms R. Byles, **Highland:** Mr & Mrs K. Coombes, Dr A. Keith, Mr A. Kirkland, Ms I. Lister, Mr & Mrs G. Reid, Mr T. Schulz and family, Mr W. Weld-Moore and family, **Lothian:** Ms K. Allan, Miss C. Brown, Miss C. Caporusso, Ms L. Gressani, Mr J. Hogarth, Miss E. Lawson, Mr M. Radka, Mr B. Scott, Dr G. Steele, Professor A. Tate, **Moray:** Mr T. Reardon, Mr D. Slater, **North-East Scotland:** Mr I. Collacott, Mr P. Winn, **Orkney:** Mr R. Neave & Ms E. Neave-Webb, **Overseas:** Dr N. Gray, Mr P. Perry, Mr H. Watson, **Tayside:** Mr & Mrs I. Cockburn, Ms I. Kinnear & Mr P. Cromey, **West Galloway:** Mr D. Baird.

SOC Annual Conference & AGM

26–28 October 2018, Macdonald Aviemore Resort, Aviemore. For full programme details and to book, visit *www.the-soc.org.uk*.

Scottish Birdwatchers' Conference

16 March 2019, Corran Halls, Oban, Argyll. Next year's BTO/SOC one-day event is being run in collaboration with the Argyll Bird Club. Programme and booking information will be included with the December issue of *Scottish Birds*.

Waterston House

Art Exhibitions

Keith Brockie: 1 September to 3 October
Lisa Hooper: 6 October to 14 November
Lucy Newton: 17 November to 16 January 2019

Join HQ's Art Events mailing list

If you would like to receive invitations to our art exhibitions and other art-related events, email exhibitions@the-soc.org.uk or call 01875 871330. Alternatively, visit www.the-soc.org.uk and click on the Waterston House Art Events mailing list button.

Autumn Book Sale!

Throughout September, there will be 50% off all second hand books at the HQ shop. For members too far away to pop in to Waterston House, we may be able to help you browse for a bargain from afar and post it to you (p&p charges apply). Please contact SOC Librarian, Susan Horne, library@the-soc.org.uk or call the office on 01875 871330

Optics Demo Day

Sunday 23 September, 10 am–4 pm, free event
A wide range of binoculars and telescopes to try out in field conditions. Or pop in for some free, friendly expert advice. If there are any models that you are particularly interested in looking at, please let us know and we will do our best to have these available for you to try at the event. Email Stuart Rivers, birdingofficer@the-soc.org.uk

Aberlady Goose Watch

Guided walk: Saturday 6 October, 06:45 for 07:00 start - join the Aberlady Bay ranger for a leisurely stroll by the reserve to learn about the migrating geese and hopefully enjoy the spectacle of the birds taking off from their overnight roost at the bay. Meeting at Waterston House and returning to the centre afterwards for hot refreshments and a breakfast roll.

Illustrated talk: Monday 8 October & Thursday 11 October, 4:30 pm for 5 pm start. Always popular, this is an engaging and informative presentation by the Aberlady Bay ranger on the migrating Pink-footed Geese that descend on the reserve each autumn, usually in their thousands. The talk is followed by an opportunity to get out on the decking and watch the birds fly in to roost.

Waterston House goose watches are run in collaboration with East Lothian Council Countryside Ranger Service. The price to SOC members and children is £8.00 (non-members £10.00) and includes refreshments. Places are limited so advance booking is essential. Call 01875 871330.

Up-to-date details of all upcoming events at Waterston House are available via the SOC

website (scroll to the 'What's On' section of the homepage) and on Facebook www.facebook.com /ScotlandsBirdClub Or join the HQ events mailing list at www.the-soc.org.uk/members-area or give us a call on 01875 871330.

Birdwatching for Beginners - Guided Walks

As reported in the June issue, SOC member and Perth & Kinross SOC Local Recorder, Scott Paterson, is HQ's new guided walks' leader. Courses comprise a block of four consecutive walks (weekday and weekend courses available) and the price to SOC members is £24 (non-members £32) in and around the Lothians, each walk lasting 2–3 hours and taken at a leisurely pace. There are also plans for one-day bird ID workshops. If you would like to join the mailing list to receive details of upcoming course dates, please email mail@the-soc.org.uk or call Waterston House on 01875 871330

Christmas opening hours

Waterston House will remain open during the festive season, closing only on Christmas Day, Boxing Day and New Year's Day.

Branch updates

Branch secretaries

A number of secretaries of the local groups have switched to using a dedicated SOC cloud-hosted email address. Please see the Branch/Recorders page on the inside back cover for an updated list of contact details.

Orkney

New Local Recorders - Russ Neave and Emma Neave-Webb, 01857 600272, orkbird.recorder @gmail.com Russ and Emma have taken over from Jim Williams. SOC Council thanks Jim for his many years of dedication to the role.

Branch news and events emails

Not receiving your branch e-newsletter or email reminders of talks and outings? Following the new data protection legislation ('GDPR') that came into force in May, we now need members' explicit consent to be able to send these emails. To join the mailing list to receive your local branch e-communications, visit www.the-soc.org.uk/members-area or call the office on 01875 871330

Scottish Local Bird Recorders' Meeting July 2018

A meeting of Scotland's Local Bird Recorders took place at Stirling University on 21 July this year, with participants from all Scottish bird recording areas invited and representatives of RSPB, BTO, BTO Scotland, the Rare Breeding Birds Panel and Scottish Birds Records Committee also present. With the last such gathering as long ago as February 2009 there was much to catch-up on and discuss, and the agenda addressed topics such as record submission, archiving of records, description species, the Online Scottish Bird Report, aspects of digital recording, and the use of BirdTrack and its benefits to users and local recorders. The next meeting is scheduled for 2020.

Plate 204. Participants at recorders' conference (L-R): Iain Gibson (Clyde), Jeremy Wilson (RSPB/SOC), Peter Stronach (High), Martin Cook (M&N), James Main (SOC), Yvonne Benting (OH), Julian Smith (Caith), Chris McInerny (SBRC), Paul Collin (D&G), Val Wilson (Clyde), Angus Hogg (Ayrs), Jon Cook (A&D), Malcolm Chattwood (Arg), Dawn Balmer (BTO/RBBP), Ian Andrews (SOC), Jim Dickson (Arg), Alan Knox (SOC), Scott Paterson (P&K), David Parkinson (Bord), Graham Sparshott (Fife), Stephen McAvoy (BTO/BirdTrack), Stephen Welch (Loth), Martin Moncrieff (Bord), Nick Litttlewood (NES), Russ Neave (Ork) © *Stuart Rivers*

David Steel - a new member of SBRC

SBRC welcomes David Steel as a new member of SBRC, replacing John Nadin from November 2018. David brings much knowledge to the committee, having lived on and managed the Farne Islands (Northumberland) from 2001 to 2014 before becoming the Reserve Manager of the Isle of May since January 2015. David has seen and found many rare and scarce birds in both the UK and Scotland.

SBRC would like to acknowledge its gratitude to John Nadin for his work over the period of his tenure on the committee. John contributed a great deal to SBRC, and we wish him well for the future.

White-billed Diver to be removed from SBRC List

White-billed Diver *Gavia adamsii* has become a regular spring and winter visitor to certain localities in Scotland, with smaller numbers seen elsewhere in the country. Each year up to 30 birds are seen with, on some occasions, groups observed. For this reason, and following careful consideration, SBRC will no longer assess records of this species from 1 January 2019. Records should instead be considered by local committees.

Chris McInerny, on behalf of SBRC

Two memorial plaques installed at Waterston House

The art gallery at Waterston House is named in honour of acclaimed wildlife artist, author and SOC founder member Donald Watson. 28 June this year was the centenary of his birth and the Club has marked this anniversary in two ways. First, the programme for the Scottish Birdwatchers' Conference in Dumfries in March, reported in the June issue of *Scottish Birds*, was "Donald Watson Centenary Special: a celebration of the Birds of Dumfries and Galloway." Second, the SOC Library Committee decided that an appropriate way to commemorate Donald and his contribution to the Club would be to install a permanent plaque in the Donald Watson Gallery. From this decision it followed that there should also be another plaque installed in the Waterston Library commemorating the huge importance of George Waterston in the Club's history. So, these two plaques were duly ordered from a sign-making company. Each is made of anodised aluminium to allow inclusion of images and measures 15 cm x 20 cm to fit exactly on vertical wooden pillars in the gallery and library. They have recently been installed, look very good and are being admired by all.

John Savory

Donald Watson
1918-2005
Born in Surrey, Donald came to live in Edinburgh as a child. He was an acclaimed artist, naturalist and author, best known for his evocative depictions of the Galloway countryside, where he lived most of his life, and his classic studies of the Hen Harrier.
He was a founder member of the Society of Wildlife Artists and the Scottish Ornithologists' Club, of which he was a former President and Honorary President
This gallery is named in his honour and this plaque commemorates the centenary of his birth on 28 June 1918.
George Waterston
1911 – 1980
A native of Edinburgh, Waterston's ideas and drive transformed Scottish ornithology by
his involvement in the founding of the Scottish Ornithologists' Club (1936), bird
observatories on the Isle of May (1934) and Fair Isle (1948), the RSPB's Scottish
Office (1956), the journal Scottish Birds (1958), an Osprey Centre for the public at Loch
Garten (1959) and a Scottish Centre for Ornithology and Bird Protection (1988).
His outstanding service to bird conservation was recognised by election as a Fellow of the
Royal Society of Edinburgh, an OBE, the RSPB gold medal and an honorary doctorate
from Dundee University
A former Secretary, Vice-President and President of the Scottish Ornithologists' Club,
this building and its library are named in his honour.

Plate 205–206. Memorial plaques, Waterston House, June 2018. © *Susan Horne*

Lisa Hooper's Exhibition, 6 October–14 November 2018

The SOC is pleased to welcome printmaker Lisa Hooper back to the Waterston House Gallery for her fourth solo exhibition since 2012. Lisa lives and works in Galloway where her home studio is just a few minutes' walk from the sea. She takes her inspiration from the landscape and natural history of Scotland, where she has lived since 2006. Extensive travels from the Inner Hebrides and Sutherland to Caithness, Orkney and most recently Shetland have provided the settings, the excitement and the birds that keep her work so varied and fresh.

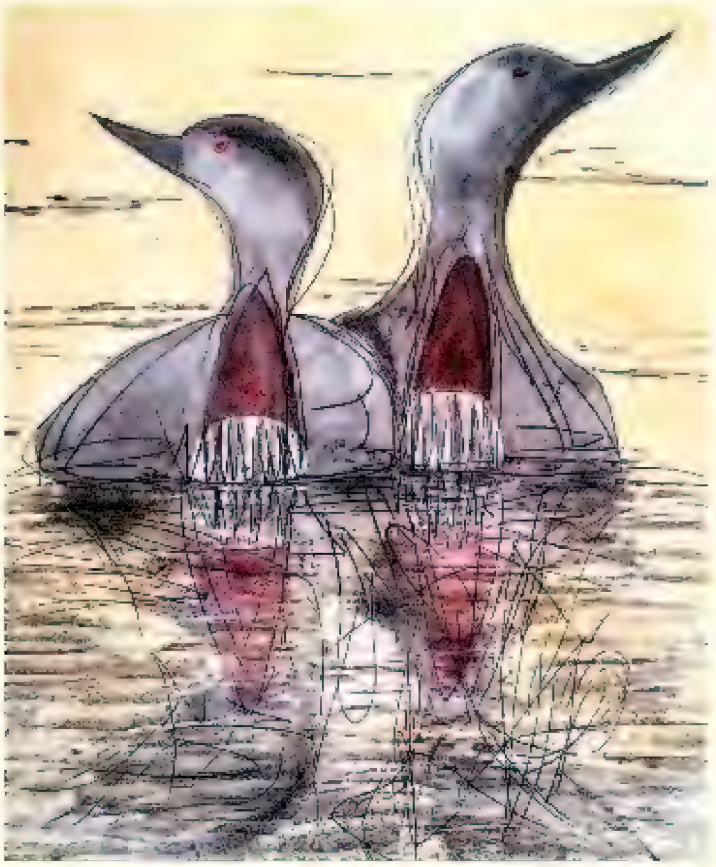


Plate 207. 'Red-throated Divers'. © *Lisa Hooper*

Plate 208. 'Sandwich Terns'. © *Lisa Hooper*

Lisa is an accomplished wildlife artist and printmaker who uses a variety of print techniques including linocut, woodcut, collagraph and etching. All four of these, her principal methods, are represented in the exhibition. Her work is diverse and experimental; she enjoys the craft of printmaking but is also interested in bringing new influences to bear. This year, for example, she has been using an iPad during the drawing/design stages of her work. Her subjects include familiar and much-loved wayside birds as well as the more elusive birds associated with the far north. Divers are a current obsession and the exhibition includes several depictions of Black- and Red-throated Divers.

...followed by an exhibition by Lucy Newton, 17 November–16 January 2019.

Plate 209. Detail from 'Red Squirrel summer'. © *Lucy Newton*

Wall-nesting Sand Martins

J. MAXWELL

Plate 210. The north wall of Bothwell Castle (with nest holes circled), Clyde, 24 April 2018. © *Jimmy Maxwell*

Bothwell Castle is a very imposing medieval fortress set high above the River Clyde near Bothwell, South Lanarkshire (Plate 210). On a visit there on 24 April 2018, I was walking along outside the north wall when the buzzing sounds of hirundines above caught my attention. At first, I supposed these to be House Martins probably nesting under the ramparts but on looking up, I realised that they were Sand Martins. I counted about a dozen in all, circling around above me and to my surprise, occasionally birds would break away and shoot up into the high sandstone wall. Soon I realised that they were entering holes and crevices in the crumbling mortar between the heavy stone blocks. The first (Plate 211) with Sand Martin exiting, and the other (Plate 212) showing a double set of used holes. Birds would make repeated flights into the same holes and often two would go in together. I counted in all 13 holes being used, much as they would be in a sand bank nesting colony. Occasionally, two or three birds would collect at a nest hole (Plate 213) and often there appeared to be a bit of aggression (Plate 214).

Plate 211. Sand Martin exiting a nest hole, Bothwell Castle, Clyde, 14 May 2018. © *Lang Stewart*

Plate 212. Nest holes in the mortar layer, Bothwell Castle, Clyde, 5 May 2018. © *Jimmy Maxwell*

Plate 213. Three Sand Martins at nest hole, Bothwell Castle, Clyde, 14 May 2018. © *Lang Stewart*

Plate 214. Two Sand Martins scrapping, Bothwell Castle, Clyde, 15 May 2018. © *Lang Stewart*

Plate 215. Avon riverbank showing metal sides, Hamilton, Clyde, 15 June 2018. © *Jimmy Maxwell*

Plate 216. Sand Martin chicks about to fledge, Prestonpans, Lothian, 30 June 2018. © *James Wallace*

Plate 217. Jackdaw at its nest cavity, Bothwell Castle, Clyde, 24 April 2018. © *Jimmy Maxwell*

There are artificial walls specially constructed for colonies, notably at Bobby Smith's sanctuary at Applegarthtown, near Lockerbie (Dumfries & Galloway) and at the SWT reserve at Montrose Basin. Sand Martins sometimes nest in cliffs and I have seen them occupying drainage holes in the sheet metal sides of the River Avon at Hamilton (Plate 215).

There is no reference to wall-nesting Sand Martins in BWP but there were records of them nesting in quay and warehouse walls in Cork City, Ireland in 2014 (Harry Hussey in www.birdforum.net/showthread.php?t=285567), and in 2017 after *Birdwatch Ireland* requested sightings of Sand Martins using riverside walls. There are also records from Wroclaw, Poland of this species nesting in the stone pillars of old bridges (reference as above). Interestingly and nearer to home, we lately received a photograph of a nest site in a wall at Prestonpans, East Lothian (Plate 216).

I returned to Bothwell Castle on 7 June to find numbers much reduced and only seven seen in the air at one time although holes were still being visited. I wondered if there could have been predation from the colony of Jackdaws in the castle - three pairs were nesting on the same north wall (Plate 217). Whatever the cause, the castle wall will certainly never suffer from the vagaries of sand erosion and increasing water levels which bedevil the normal sand bank colony.

Jimmy Maxwell

Plate 218. Sketch of Musselburgh Lagoons, 8 March 2017. © *Leo du Feu*

FIELD NOTES: The drawn out drawn-out death of a Starling

L. DU FEU

Wednesday 8 March 2017. Musselburgh Lagoons. Strong sun, strong wind.

Riding the sea waves, four Velvet Scoter. Eyes and wing patches flashing white, sharply sunlit. Beaks dazzling yellow. Legs a shocking red splash as they appear now and then during a turn or a dive, or once during flight. On the scrapes, the usual - Lapwing, Redshank, Curlew, Oystercatcher, Bar-tailed Godwit, Teal, Wigeon, Mallard, Shelduck, gulls.

Suddenly many take flight. I scan and spot a Sparrowhawk. A male, mantling the shallows over some small bird, small bird flapping, completely covered in rich slimy mud. Sparrowhawk soon exits, flying over our heads as we watch from the hide. It's carrying nothing. Now a crow comes - is this why the Sparrowhawk left? Lands right on top of the mudded bird, bird still flapping. Crow pecks, stabs, holds, stabs, drags, lifts... It's a Starling. The only colour shows when its beak opens and shuts, there's red inside. More powerful pecking. Crow flies off. More minutes pass, and very many since I first spotted that Sparrowhawk. Crow returns. A few more pecks, a few slight flaps. Crow flies. At last, no more flapping.

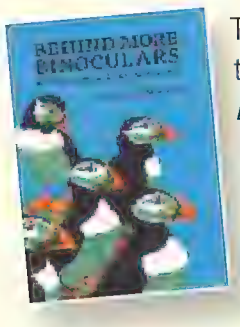
That's nature, fascinating but sometimes very hard to watch, and probably not a story for Songbird Survival!

Leo du Feu
www.leodufeu.co.uk
www.landscapeartnaturebirds.blogspot.co.uk

Plate 219. Sparrowhawk then Carrion Crow with Starling, 8 March 2017. © *Leo du Feu*

BOOK REVIEWS

Behind More Binoculars, Keith Betton & Mark Avery, 2018, Pelagic Publishing, ISBN 978-1-78427-109-1, hardback, 224 pages, £16.99.



This book is a sequel to the earlier *Behind the Binoculars* and follows the same format, consisting of eminently readable interviews by Mark Avery and Keith Betton with 17 well-known birdwatchers. One might expect that all the A-list birders had been included in the earlier book, but the new interviewees will be household names to most birdwatchers, and many offer interesting insights into non-ornithological events of the time. Perhaps the book's biggest attraction is that most readers will find incidents that they can relate to personally - Roy Dennis tells how the "Booted Warbler I saw as a schoolboy on Fair Isle in 1959" subsequently proved to be Britain's first Sykes's Warbler. A lifer, and a first for Britain, added nearly 60 years after the event! A slight weakness is that most of the interviewees are of 'a certain age' and reminiscing about the 1960s and 1970s will be regarded as ancient history by younger birdwatchers. But it's a good entertaining read, and although it might be dismissed as a kind of ornithological *Hello!* magazine, there's enough serious stuff about the development of conservation organisations and changes in bird populations to give it a serious edge. There is a short overview chapter at the end, and a good index.

Jeremy Brock

Pressing On: a decade of new linocuts. Robert Gillmor, 2018. Mascot Media, Norfolk, ISBN 978-1-9998457-1-1, hardback, 168 pages, £25.00.

Here is another new book to delight fans of the elegant artwork of Robert Gillmor, who is still 'pressing on' in his ninth decade and who surely needs no introduction. He started making his linocut prints after his move to north Norfolk in 1998 and in this book, he presents all the commissioned work he has produced over the past 12 years or so. He has divided it into seven sections which deal with: gallery prints, postage stamp designs, Collins New Naturalist Library book jackets, other book covers and illustration, annual Birdfair posters, Christmas cards and, finally, how he actually makes his prints. It is a well-designed book with excellent colour reproduction of lovely images, each of which has a concise accompanying text by Gillmor which puts it in context. In no way does it overlap with his previous books and I thoroughly recommend it.

John Savory

Nature of Manor: natural history of a valley in south-east Scotland. Graham Pyatt, 2018. Pyatt, ISBN 978-1-5272-1667-9, softback, 422 pages, £20.00.

They say you remember your most joyful experiences as though glowing in sunlight. As a child and youth, I spent many happy days rambling in the Manor Valley, and have many happy memories, most of which, though very joyous, I recall as bathed sometimes in rain, snow and mist as well as in sun, as I searched for cloudberries and plovers on the upper heath or sought out Dippers, butterflies, wildflowers and mushrooms in the lower farmlands and woodlands of the valley. Often my rambles were made with the haunting and melancholic backdrop of the call of the Curlew. At other times, I remember sitting on the track side eating my honey sandwiches and drinking a thermos of tea to the summer song of the Yellowhammer. Now those were hot sunny days. What memories! This book has enabled me to relive many of my memories, now somewhat distant, but with much greater understanding than then, through reading the author's careful descriptions and explanations of the valley and its ecology. This is so much more than a catalogue of information, rather it is a careful study, dedicatedly and lovingly prepared from the author's 37 years experience as an ecologist and soil scientist with the Forestry Commission.

The book opens with a geological, hydrological, climatic and glacial explanation of the landforms, soil types, land uses and management and shows how the various distinctive ecosystems arise. There then follow detailed descriptions of the diverse flora and fauna and the book closes with an argument concerning the need for more sensitive controls over diversity, sustainability and land use coupled with criticism of policy and regulation as these currently exist.

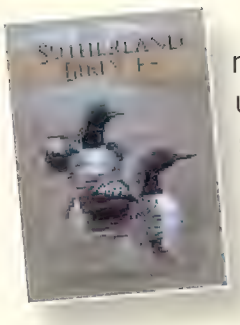
The author devotes 281 pages to bird life giving detailed and informative accounts, distribution graphs and occurrence tables for the various species, frequently including information on population growth or decline, bird movements and migrations, nesting and other behaviours of interest, and the effects of the natural environment upon the species concerned. The book is imaginatively laid out too and includes many beautiful colour photographs of features, landscapes, wildlife and birds. Those seeking greater specification will find references to a wealth of additional material available electronically, on application to the author, providing greater detail on additional bird accounts and surveys, further information on vascular plant species, and plant species maps, trees, river and stream profiles and flood analysis.

This book is a fascinating read, detailing the various ecosystems, species and landscape of this wonderful valley. It sets a standard rarely achieved for ecological analysis but remains at the same time accessible and interesting to the more general reader. It is therefore both an excellent guide for anyone visiting the valley and wishing to locate its best features and is also a great addition to any birdwatcher's library.

Duncan Spiers

Sutherland Birdlife. Fraser Symonds & Alan Vittery, 2018. Privately published, ISBN 978-1-78808-492-5, paperback, £16.50.

This is very much an update of the status of birds in Sutherland since the publication of Alan Vittery's *The Birds of Sutherland* in 1997. Some 40 species have been newly recorded since then, and



many others have undergone significant population changes. This is not just an annotated systematic list of species, but rather an in-depth account of all aspects of ornithology in the area.

After a brief look at geology, effects of glaciation, soils and climate there are 56 pages covering bird habitats in Sutherland, 32 discussing conservation issues, 11 highlighting breeding specialities, migration and key sites, and 73 pages detailing the systematic list of species recorded in the area. The latter section has details of further records since 1997 for rare/scarce species and any population changes for the commoner ones. In addition, there are ten pages of excellent watercolour paintings of 17 species by Fraser Symonds, who also supplied the superb front cover illustration of Black-throated Divers. A generous number of high quality colour photographs pepper the text, and there is a map of key sites.

An excellent book at a sensible price, and an essential update for anyone with an interest in Sutherland ornithology.

Stuart L. Rivers

Farming and Birds. Ian Newton, 2017. HarperCollins New Naturalist, ISBN 978-0-00-814790-7, 628 pages, softback, £35.00.

Anyone with an interest in how birds are affected by their environment or the state of the British countryside should read this book. Agriculture is the single largest influence on the landscape of our islands; three quarters of the land surface is cultivated or grazed compared to c.2% as nature reserves. Ian Newton has a lifetime of experience with his subject matter. He grew up in rural Derbyshire, carried out his doctoral research on British finches, then worked with geese on farmland. He is particularly well-known for his research on the effects of pesticides on birds, especially birds of prey. The fact that this is his fourth New Naturalist volume reflects the width of his knowledge and his ability to explain highly complex scientific research to the wider public.

This book updates and expands on the NN volume by Kenneth Mellanby on farming and wildlife published in 1981. Its 22 chapters are based around six key themes: agricultural developments since the Neolithic; the wildlife and plants of farmland; recent changes; semi-natural habitats; the uplands; and conservation on farmland. While he examines agri-environment schemes and acknowledges the genuine interest in conservation of many farmers and land managers he comments sadly but realistically 'almost every aspect of agricultural change over recent decades has proved harmful to wild plants and animals.'

The review copy was softback but the Harper Collins NN website lists a hardcover version available at £65 while there is even a leather-bound one at £250, presumably reflecting the interest book collectors have in this famous series.

Stan da Prato

RINGERS' ROUNDUP

This edition of the Ringers' Roundup is provided mostly by members of the Tay Ringing Group and gives a flavour of some of their projects during 2017–18 across the Angus & Dundee, Fife, Perth & Kinross and Upper Forth recording areas.

Bird-tracking studies in Scotland

Three contrasting species are the subjects of ongoing tracking studies being undertaken as partnerships between local ringers and the BTO in Scotland - Short-eared Owls, Arctic Skuas and Willow Warblers.

In 2017–18, seven breeding Short-eared Owls have been fitted with GPS-satellite tags in Upper Forth, Perthshire and on Arran. These have shown in unprecedented detail how the birds make use of moorland and associated habitats and how that changes with times of day and through the year. Early findings from this work have also demonstrated connectivity with birds from elsewhere in Scotland and further afield. Two birds that bred in Scotland in 2017 have even spent much of the summer of 2018 (so far) likely breeding in Norway; one of them having left after a breeding attempt in Perthshire. Subject to funding being secured, these will be studied further.

Plate 220. Short-eared Owl. © *Anne Cotton*. This male successfully bred near Dunblane in 2017 where it stayed until April 2018. It then moved to south-central Norway, where it remains.

Plate 221. Arctic Skua. © *Charles Chadwyck-Healey*. Having bred on Fair Isle in 2018, this bird travelled south into the Moray Firth to feed.

Again, over the past two years, 23 Arctic Skuas breeding on Fair Isle and in Orkney have been fitted with GPS tags to investigate the foraging behaviour from two colonies; one where breeding success is very poor and one where birds are generally more successful. The aim is to identify what could be limiting success for this declining seabird across Scotland. In addition, 19 skuas have been, or are carrying light-sensitive geolocators, which when recovered will show where they have spent the rest of the year.

In 2018, similar but much smaller geolocators were fitted to 25 Willow Warblers in the Ochil Hills. When recovered in 2019, these tags should show their migration and wintering movements which will be compared with those of a cohort of birds tagged in Norfolk. This could shed some light on why this species is doing so well across much of Scotland but is faring rather poorly in more southern lowlands.

With many thanks to those who have helped with and funded these projects.

'Reed Sparrows' on the Tay

Reed Warblers were so scarce in Scotland that they did not merit a mention in Robin Hull's *Scottish birds: culture and tradition* (2001). The term reed sparrow is an English epithet that links closely to the bird's reliance on reedbeds. Given the extent of reedbed in Scotland and the proximity to populations in both England and Scandinavia, it is perhaps surprising that until the 1990s there was only one Scottish breeding record (Shetland 1973). However, birds have been recorded on the Tay from at least 1981 with breeding suspected from at least 1987 and (at the risk of offending friends in Solway and Borders) Tay birds were probably the first to breed on the Scottish mainland.

In 2000, Derek Robertson wrote an article in the Tay Ringing Report on breeding Reed Warblers on the Tay and concluded: "Despite under-recording, this species is best described as a sporadic breeding bird in Scotland generally, although it has established itself at a handful of sites. It will be interesting to see if the tentative extension of its breeding range continues".

When Derek wrote that article a total of three birds (two adults and a recent juvenile) were captured in 2000. As can be seen by the graph below in the intervening 17 years much has changed, with 101 new birds captured in 2017, with 25 adult captures (new and retrapped birds) and 92 juvenile captures.

The sound of Reed Warbler song is now pervasive in hotspot areas such as Seaside and Powgavie, and an 'acro' in the net is as likely to be a Reed Warbler as it is a Sedge Warbler. The Reed Warbler appears to be a climate change winner, with populations in both the UK and Scandinavia expanding. Whilst relatively few sites in Scotland have been colonised by Reed Warblers, within the Tay the species has consolidated its early beachhead and become well established as a Tay breeding bird.

Is this at the expense of the Sedge Warbler? It is hard to say, as numbers of Sedge Warblers ringed on the Tay fluctuate widely, although the overall trend would seem to indicate a gradual decline. Something to ponder amidst the midges and mud as one wades towards the nets in search of answers.

Where do our 'white-wingers' come from, where do they go and what do they do in between?

The ongoing North-east Scotland gull-ringing project has told us much about the different life stories and migration patterns of our gulls. It extends from North-east Scotland south through coastal Angus and uses a single coloured ring each engraved with a unique four-character (letter/number combination) code. While most of the Iceland and all of the Glaucous Gulls so far colour ringed have been caught in North-east Scotland, the first Iceland Gull was ringed in

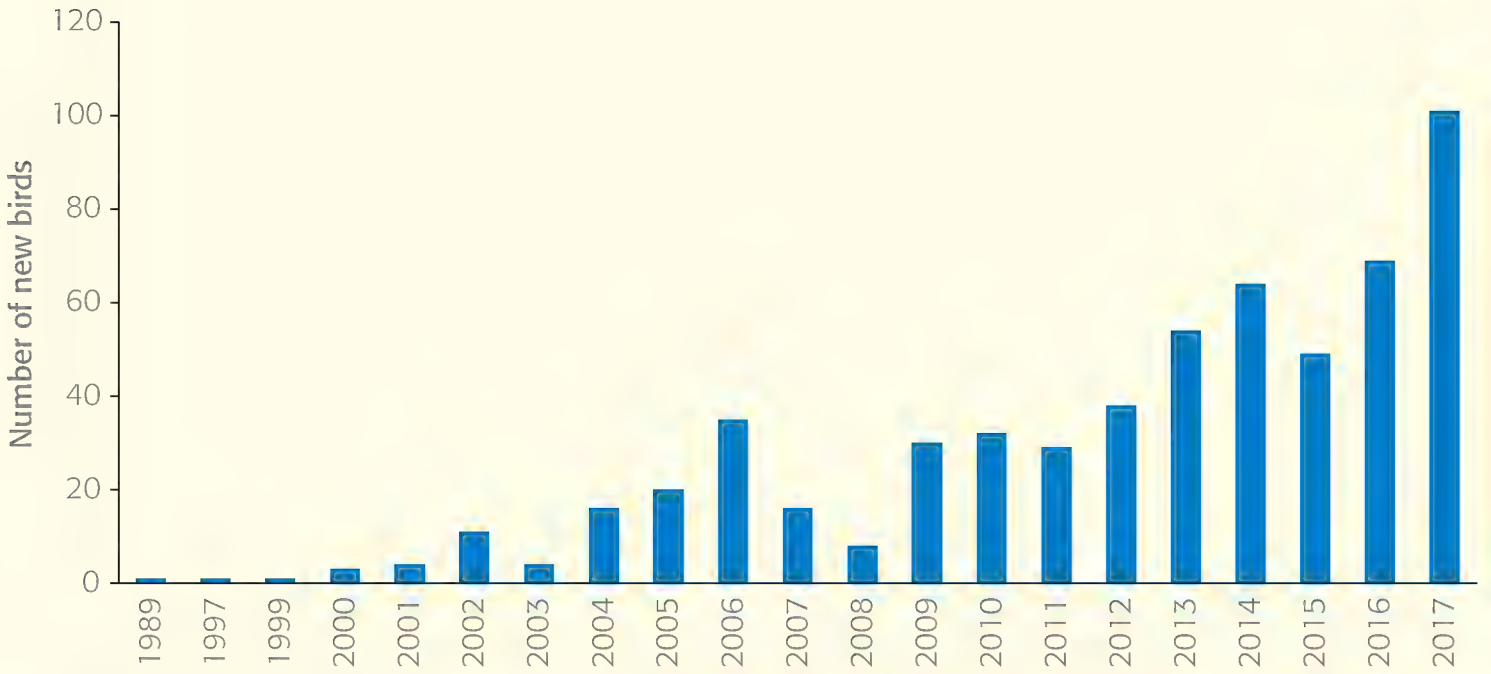


Figure 1. Number of new Reed Warblers trapped at the Tay Reedbeds, 1989–2017.

Plate 222. Water Rail, Tay Reedbeds, 2018. © *Derek Robertson*

Angus. It has subsequently been resighted in a number of locations. Found in Arbroath as a juvenile in late winter 2014/15, it was caught on 19 April 2015. Despite already having lingered a long time, it clearly found the regularly offered fast food (including Gayfield Park half-time mutton pies!) to its taste and looked like it would never want to leave. Still there on 9 July, it was then seen with the loafing gull flock on the beach at Lossiemouth on 11 July.

Things then went quiet until winter that year when it was found to be present at a construction site by the A9 near Thurso, Caithness. Once again, it was found to be sharing any left-over lunch that it was offered! Subsequent sightings have been in this area and at the Thurso river mouth this spring (2018) when it was photographed - now in pristine adult plumage. Where it goes in summer is as yet unknown. We live in hope of a resighting in Newfoundland. Anyone going there, or Greenland, in summer, please take a mutton pie to offer the Iceland Gulls... and look out for colour rings!

Water Rails in the Tay Reedbeds

Water Rails are an iconic bird of the Tay Reedbeds. Steve Moyes and Derek Robertson developed the first standardised call-playback census which established a minimum of 110 pairs breeding in the reedbeds in 1991 which was estimated to be 3–6% of the British total at that time. The survey method became adopted internationally as the recognised standard survey technique for this secretive species. Steve and Derek carried out a trapping and radio tracking project in the early 1990s and established estimates of territory sizes and foraging behaviour of these birds. The study included detailed tracking of a female that nested, hatched and raised her chicks while tracked by her radio transmitter. A new trapping project was started three years ago to test recaptures and colour ring resighting rates with camera traps and to establish what proportion of breeding birds were recovered in subsequent years.

About 25% of birds were retrapped or their colour rings captured by the camera traps in the following breeding season. The birds took well to wearing colour rings and their behaviour seemed the same as those only fitted with metal rings.

This project, along with earlier trapping in the 1990s, indicated that most of our breeding birds disappear in the winter and return in the summer. Interestingly a different cohort of birds appear in the winter which are not found in the breeding season. Data loggers are being fitted to breeding birds over the next few summers with the hope that returning birds will bring back the data to unravel the mystery of where they are going in the winter. We have only one control of our Water Rails - a juvenile caught in the Tay Reedbeds in late summer and found freshly dead on Bardsey early the following spring.

What are Dippers in Angus getting up to?

After a few tentative years of testing the BTO's Retrapping Adults for Survival (RAS) methodology, the Angus Dipper RAS formally 'took the plunge' at the start of the 2015 breeding season.

The study area is the catchments of the Lunan, Brothock, Elliot and Dighty Waters in lowland Angus. These rivers and their tributaries may hold in excess of 40 Dipper territories.

To date, 418 free-flying Dippers have been caught. Each bird, as well as being fitted with a BTO metal ring, also carries a unique combination of three plastic colour rings which make it individually identifiable in the field.

So, what is the RAS revealing?

- The majority of nest sites are on or under man-made structures, such as bridges.
- The oldest-known Dipper in the study is a female who, when last seen was 5 years and 68 days old. For longevity purposes, the bird is aged only from the date of ringing so is likely to be even older than this.
- There have been several confirmed instances of a bigamous male and in one of these triangular relationships; the male covered a combined territory length of 1.5 km.
- With regards to movements, whereas the majority of Dippers remain faithful to their natal catchment area, several birds, all females, have moved to other river systems. The furthest such movement was undertaken by a female ringed as a nestling on a tributary of the Dighty and subsequently caught on the Elliot Water, a distance of 31 km.
- The early years of the project have found established pairs 'divorcing' and taking new partners and as time goes on the project will reveal more insights into this fascinating bird.

Barn Owl nest boxes near Falkirk

Tay Ringing Group are involved in monitoring a number of owl nest box schemes especially throughout the Upper Forth recording area. A fairly recent study is a small scheme of 30 boxes in conjunction with Falkirk Council. The boxes are monitored by the Ranger Service and several volunteers co-ordinated by Lesley Sweeney. Monitoring started in earnest in 2009 and has found about 10 boxes are occupied by Barn Owls in any one season. Some are occupied every year but others have never been occupied, being taken over by Stock Doves, Tawny Owls, squirrels and Jackdaws. The average number of chicks ringed in a year is between 20 and 25, but in 2017 a total of 38 chicks were ringed in what proved to be a bumper season. Four broods had five young. The season for 2018 has just got underway and chicks are being produced but in smaller numbers.

Plate 223. Barn Owl at the nest in the Falkirk area. © *Anne Cotton*

Although Barn Owls are not known for wandering far, one of the chicks from the scheme was caught on a nest as an adult near Blair Drummond.

GR50506

1 25/09/2016
Muiravonside, NS9675 (Falkirk)

R 29/05/2017
Blair Drummond, NS7399 (Stirling)
34 km NW 246 days

R 13/07/2017
Blair Drummond, NS7399 (Stirling)
34 km NW 291 days

Perthshire owls with bells on

The low recovery rate for owls initially ringed as pulli or at the nest convinced Neil Morrison and Colin Shand that to gain further insights about the movements and behaviour of this fascinating group they would need to capture juvenile and adult birds using mist nets and tape lures. Not an insignificant challenge.

On most occasions, the nets go up in the dark, so it is difficult to see the birds getting caught. For this reason, small bells are hung at various points on the net to instantly alert the ringers of the arrival of a bird which is then quickly extracted, processed and released.

Plate 224. Short-eared Owl in Perthshire. © *Neil Morrison*

It was quickly discovered that all four owl species were attracted to the nets and fairly soon a small number of Barn Owls ringed locally as nestlings were re-trapped as juveniles or adults. A long-distance movement was a Barn Owl ringed in the nest near Loch Lomond and caught three months later near Balbeggie - over 40 km away.

An interesting Tawny Owl retrap was a female originally ringed as an adult at a nest box near Scone and netted five years later only 100 m away from the same box. Another Tawny Owl was breeding in the box, begging the question whether the original female had been evicted.

Short-eared and Long-eared Owls are caught in smaller numbers. There have been no re-traps so far but it is the early stages of this project. It is hoped as time goes on we will build up a picture of the movements of our local owls, and perhaps owls from further afield!

Temperature and Blue Tit nest building

Over the last four years there has been a Blue Tit colour ringing project in St Andrews as part of a PhD investigating nest-building behaviour in Blue Tits. This year there were 26 returning males and 35 returning females (of which seven males and 11 females were returning for the third time). Most adults return to the same, or adjacent, nest box, but this year one female moved over 400 m. Very unusual. This year also saw the return of female M/C-C/C, who was ringed as an adult in 2015 and has returned year on year. We now have five nests from this female (two were built in 2017 as she abandoned the first).

From the data collected we are starting to see a trend for birds shifting the date they start building and laying in response to local temperature, but they do not seem to change what they are building e.g. size of nest. We do occasionally get reports of the colour-ringed birds around St Andrews, so if you see any please let us know (@StA_Nestboxes on Twitter). 2018 was also a good year in St Andrews for Blue Tit breeding. From 59 nests, we ringed 333 pulli, of which 284 fledged (85% fledgling success).

Montrose Twite - ups and downs

The decline of wintering Twite in eastern Scotland was reported in a previous Ringers' Roundup (*Scottish Birds* 36(1): 44). At Montrose Basin, the winter of 2017/18 saw a marked increase in the number of Twite caught and ringed compared to recent years. Prior to 2008/09 there were very few records of Twite at Montrose Basin. Searches through *Angus & Dundee Bird Reports* going back to 1985 and *Angus Wildlife Review* as far back as 1976 show numbers in Angus usually in single figures with only a few sightings of flocks in double figures. During this time a sighting at the Basin would have been a rarity. In the winter of 2008/09, a sizable flock was noted and ringing began in March 2009 with 28 birds caught.

During the following winter (2009/10), catching effort was intensified using a whoosh net and an artificial perch of temporary chestnut paling fence with woven branches above an area baited with Niger seed. A subsequent change from Niger to Rape seed due to supplies running out made no difference in the number of birds using the bait and Rape seed has been used ever since. The artificial perch worked well as the surrounding farmland is flat and this is the only perch for a considerable distance around and resulted in 238 birds being caught in 2009/10. Numbers have fluctuated since then as can be seen in the table below, despite effort and the catching method remaining the same.

Table 1. Wintering Twite numbers Montrose Basin.

2008/09	28
2009/10	238
2010/11	67
2011/12	0
2012/13	145
2013/14	42
2014/15	46
2015/16	43
2016/17	58
2017/18	215

In summary, numbers fell rapidly after 2009/10, with few Twite seen and none caught in 2011/12. Catches recovered in 2012/13 and then averaged around 47 between 2012/13 and 2016/17, before a large catch in winter 2017/18. Until the winter of 2011/12, waste grain was used at the Seacrook field on Mains of Dun farm on the west side of the Montrose Basin as bait to attract the Mute and Whooper Swans from foraging on the surrounding rape and cereal crops and although the Twite took advantage of the broken grains and weed seeds it is not thought that this was a significant factor driving the number of birds using the site.

All new birds are colour ringed with 'BTO metal above yellow' on the right (North-east Scotland Twite project) and 'winter-year colour above white' (indicating the bird is from Montrose) on the left. The use of colour rings has led to sightings of 'Montrose' birds throughout the west coast including ten on Skye. There have been a number of captures of Montrose-ringed birds by Tony Mainwood at Clachtoll on the west coast of Sutherland, and birds ringed at Clachtoll have also been caught subsequently at Montrose.

It is now known from ringing that wintering Twite on the east coast comprise largely of breeding birds from the west of Scotland. It is likely that more sightings of Montrose birds in the west would occur but for the low density of ringers and observers in this area.

No obvious link to numbers has been found in relation to temperature or rainfall in either wintering or breeding sites although a particularly good breeding season in the summer of 2017 might have led to an increased number of birds at Montrose, possibly linked to displacement from a wintering site that is now unsuitable.

More about the Tay Reedbeds

Once again, the Tay Reedbeds produced a significant proportion of all birds ringed by Tay Ringing Group. In 2017, a total of 2,574 birds ringed which was 15% of the group total of 17,268 across all areas.

A priority species is the Bearded Tit with ringing effort feeding into the BTO Retrapping Adults for Survival (RAS) project and monitoring studies by SNH and RSPB. Last year 404 Bearded Tits were ringed, the third highest total since they colonised the reedbeds. In part this was due to extra catching effort. Typically, a RAS season is April to August but the Group have now

committed to ringing visits in March and September and in 2017 there was an extra visit in October. The visit in October caught an incredible total of 120 birds.

Reed Warbler numbers continued to increase with a total of 101 ringed and Water Rail numbers were also at record levels with 30 being ringed. Hirundine numbers were well down on most years and may reflect a poor breeding season. Sedge Warbler had a better year with 444 ringed. Willow Warbler numbers appear to be continuing to decline at 165 while Chiffchaff numbers are rising and 118 were caught.

Reed Bunting catches across all the Tay Ringing Group sites declined in 2017. Only 169 were ringed in the Tay Reedbeds from a group total of 279. This was only 57% of the record 2016 total for the group of 479.

Hirundine recoveries were as always interesting with recoveries and controls from France and Spain and a Swallow travelling all the way to the DR Congo (see selected recoveries).

Leg flags and colour rings from Glen Clova

During 2016 and 2017, 73 well-grown Lapwing chicks and 22 Oystercatcher pulli have been colour marked within Glen Clova, Angus as part of a wider study to collect data on pullus growth rates.

Lapwings carry a yellow leg-flag on their right tibia engraved with two black letters and a red ring on the left tibia as the scheme marker. Twenty-two Oystercatcher pulli, along with five

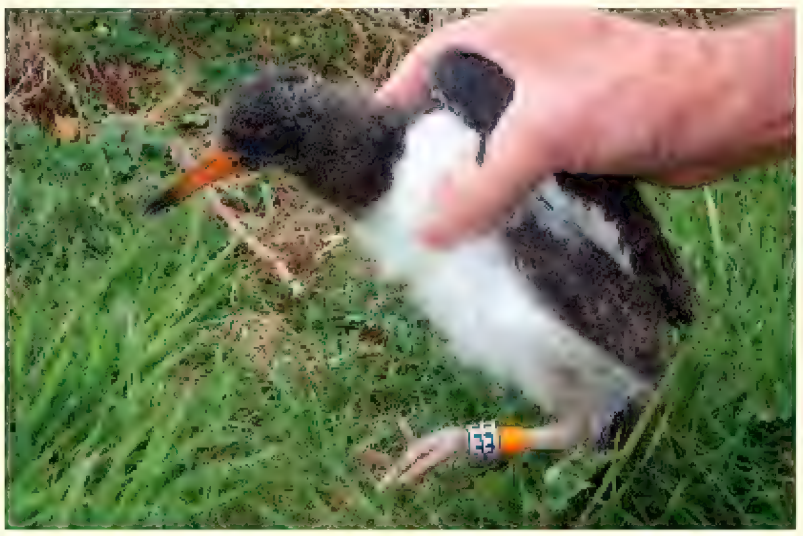


Plate 225. Oystercatcher, Glen Clova, Angus & Dundee, 2018. © *Bruce Lynch*

Plate 226. Lapwing, Glen Clova, Angus & Dundee, 2018. © *Bruce Lynch*

adults mist-netted at night sessions, carry a white plastic ring on the left tarsus engraved with two black letters and an orange ring above as the scheme marker.

To date, no Lapwing flag codes have been read in the field outside the study area, although an adult Lapwing with a yellow flag and a red scheme marker was reported from Fife during early 2017. Within Glen Clova, several birds have been photographed and their codes read. A pullus from June 2016 was photographed back in the study area in March 2017. A brood of three, flagged in late May 2017, were photographed after fledging in early June some 1.5 km north-east of their nest site. Also, a chick from 2016 was found freshly dead in May 2017 within a few hundred metres of where it was hatched and ringed in 2016.

Colour-ringed Oystercatchers have provided several field sightings outwith the study area. A pullus from 2016 was recorded from the outer Tay Estuary during January and February 2016 and again in February 2017. Another pullus ringed in June 2017 was reported from Hoylake on the Wirral in September 2017. An adult mist netted at night on Glasslet Farm, Glen Clova in March 2014 was recaptured at the same site in March 2016. The only adult ('CC') mist netted in February 2017 remained near its catching site throughout the summer and bred successfully before being photographed on Broadmeadow Estuary north of Dublin Bay.

Please check out Lapwing and Oystercatcher flocks and report any sightings to: b_lynch1@sky.com.

Tree Pipit ringing at North Queensferry, Fife

Visible migration studies by Graham Sparshott (the Fife bird recorder) over the last few years have shown that the north side of the Forth 'crossing' at North Queensferry is an effective funnel for south-bound migrants in the autumn. Counts in 2016 showed that this route is much-used by Tree Pipits, with a record UK vismig count of 167 flying south on 14 August, from a total of 630 seen passing over by mid-September. The Tree Pipit is one of the earliest diurnal migrants, with movement beginning before the end of July. These early dates show that the birds seen are from Scottish breeding populations further north.

In 2017, Clive McKay assisted by Anne Cotton and Rob Campbell set out to catch and ring Tree Pipits at North Queensferry to see what could be learnt about their migration strategies. With permission from the landowners Tarmac, ringing took place on 14 occasions between the end of July and early September and 204 birds were caught. This was a significant contribution (15%) to the UK total of 1,323 ringed in 2017 (data kindly supplied by Rob Robinson, BTO), which was itself a record annual total (Figure 2). This was probably due both to a good breeding season and more ringers targeting Tree Pipits. On the early date of 5 August, when virtually no other migrants were on the move, 43 birds were caught.

By early September, the '*tzeez*' calls of the Tree Pipit were replaced by the '*seep seep*' calls of Meadow Pipits - the period of overlap providing

Plate 227. Tree Pipit, North Queensferry, Fife, 30 July 2017. © *Graham Sparshott*

Plate 228. Tree Pipit (left) and Meadow Pipit (right), North Queensferry, Fife, 1 September 2017. © *John Nadin*

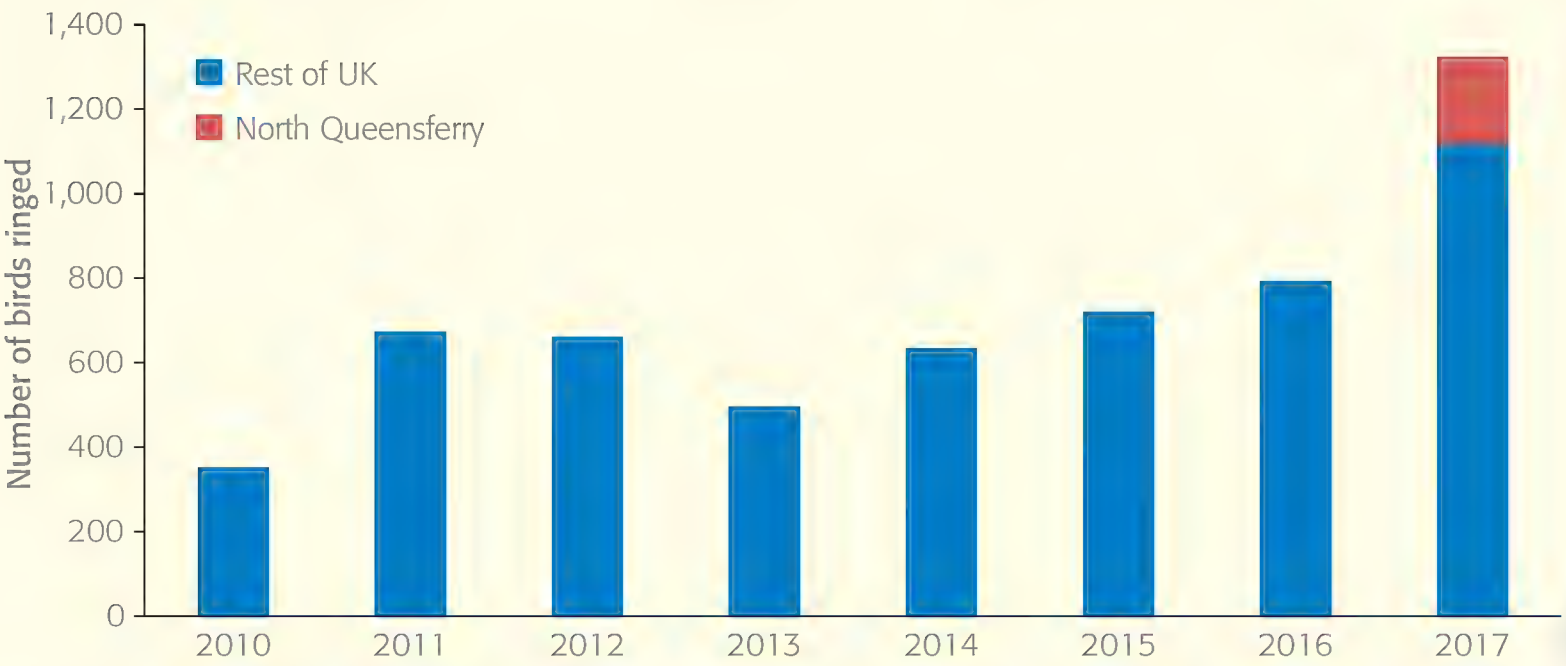


Figure 2. Total numbers of Tree Pipits ringed in the UK and at North Queensferry, Fife, 2010–17 (data from BTO).

an opportunity to compare the features of both species in the hand (Plate 228). The most diagnostic features of the Tree Pipit in the hand are its thicker bill, the pink base to the bill and the pink legs (both the latter are orange-coloured in Meadow Pipit) - but these are much easier to see on the proverbial 'bird in the hand' than on those flitting about 'in the bush'!

Ageing the birds was sometimes difficult, so the target for 2018 is to work out the most reliable ageing criteria and to ring birds in Highland breeding areas prior to their migration over Fife. It will be interesting to see whether the hot, dry summer of 2018 produces another good autumn migration for this often-over-looked species.

Selected ringing recoveries

Mute Swan

Z82845	1	22/08/1998	Stobsmuir Pond: NO4132 (Dundee)
	RR	10/12/2017	Letham Pools: NO3113 (Fife) 21 km SSW 19 yrs 110 days

Although a long way short of the BTO longevity record for this species of 29 years 1 month 11 days (set in 2009), this is one of the oldest Tay RG-ringed Mute Swans.

White-fronted Goose

138249	3F	30/09/2016	Hvanna, Jokuldalur: 65°23'N 14°49'W (Nordur-Mulasysla), Iceland
ISR	W	11/10/2017	Borrowfield: NO7159 (Angus) 1,167 km SE 1 yr 11 days

Shelduck

GN17687	6M	26/02/2005	Eden Mouth: NO4921 (Fife)
	W	18/03/2010	Ythan Estuary: NK0028 (Aberdeenshire) 117 km NNE 5 yrs 20 days
	W	11/02/2011	Ythan Estuary: NK0028 (Aberdeenshire) 117 km NNE 5 yrs 350 days
	W	21/02/2012	Ythan Estuary: NK0028 (Aberdeenshire) 117 km NNE 6 yrs 360 days
	W	15/02/2017	Ythan Estuary: NJ9927 (Aberdeenshire) 117 km NNE 11 yrs 355 days

Our thanks to Moray Souter for tracking this bird. Originally wintering on the Eden, it has been recorded on the Ythan regularly since 2010.

Tufted Duck

FH26657	1	16/06/2017	Mill of Aucheen, Glen Esk: NO5379 (Angus)
	+F	16/12/2017	Lough Neagh: 54°31'N 6°34'W (Armagh) 356 km SW 183 days

An interesting return providing evidence of where some Tayside born Tufted Duck pass the winter.

Oystercatcher

FA53935	1	30/05/2013	Loch Freuchie: NN8537 (Perth & Kinross)
	S	03/03/2018	Rogerstown Estuary: 53°30'N 6°9'W (Dublin), Eire, 364 km SSW 4 yrs

In addition to this Tayside pullus found wintering in Ireland, there have been three recoveries of birds ringed in Ireland in the winter (two from 2013 and one from 2016) and summering in Tayside.

Snipe

LC53182	4	27/09/2015	Drum: NO6758 (Angus)
	+F	08/12/2017	Waterville: 51°49'N 10°10'W (Kerry), Eire, 735 km SW 2 yrs 72 days

Woodcock

ET47401	1	29/05/2016	By Haughend, Glen Esk: NO5775 (Angus)
	R	14/05/2017	Sore Merkeskog: 59°18'N 4°52'E (Rogaland), Norway, 520 km ENE 350 days

Ringed as a pullus in Glen Esk in 2016, this bird appears to have switched breeding grounds (and country) in 2017.

Greenshank

DE30377	3	27/09/2011	Drum: NO6758 (Angus)
	RR	09/05/2017	Eikredammen: 60°46'N 8°43'E (Buskerud), Norway, 789 km NE 5 yrs 224 days

Roseate Tern

ST14589	1	24/06/2014	Coquet Island, Amble: NU2904 (Northumberland)
	VV	24/08/2017	Panbride, Carnoustie: NO5735 (Angus) 148 km NNW 3 yrs 61 days

Barn Owl

GN03590	1F	11/07/2001	Easter Polder Big Barn: NS6497 (Stirling)
	X	15/01/2002	Nether Anguston, Peterculter: NJ8101 (Aberdeenshire) 155 km NE 188 days

A relatively long movement for a Barn Owl, although not in the same league as the one ringed in Wendlebury, Oxfordshire in 2005 and subsequently found dead in a building in Afghanistan in 2006, a distance of 5,834 km.

Swallow

D411536	4M	17/07/2014	Seaside Dyke, Errol: NO2723 (Perth & Kinross)
	+F	01/03/2016	Kapanga: 8°19'N 22°37'E (Democratic Rep. of Congo), 5,809 km SSE 1 yr 228 days

Yes, we know they really do fly all that way but it is still a minor miracle. This wee chappie was shot for the pot so sadly won't be coming back for the huge autumn roost in the Tay Reedbeds.

Bearded Tit

Z463570	2F	31/08/2015	Taylodge: NO2622 (Perth & Kinross)
	R	04/10/2015	The Lurgies: NO6757 (Angus) 54 km NE 34 days

A rare recapture of a Tay-ringed bird and indicative of the potential for seeding further sites in Tayside and elsewhere in Scotland.

Goldfinch

Y654973	3J	09/07/2016	Linlathen, Broughty Ferry: NO4632 (Dundee)
	XF	01/05/2017	Bailleul-la-Vallee: 49°10'N 0°24'E (Eure), France, 840 km SSE 296 days

Key.

X	found dead
V	alive and prob healthy, caught and released, not by ringer
XF	found freshly dead or dying
N	alive and probably healthy, caught and released but not by ringer - nesting
XL	found dead (not recent)
VV	alive and prob healthy, ring or colour marks read in the field, not by ringer
+	shot or intentionally killed by man
NN	alive and prob healthy, ring or marks read in field, not by ringer - nesting
+F	shot or intentionally killed by man - fresh
R	caught and released by ringer
+L	shot or intentionally killed by man - not recent
B	caught and released by ringer - nesting
SR	sick or injured, released with ring
RR	alive and probably healthy, ring or colour marks read in the field by a ringer
S	sick or injured - not known to have been released
BB	alive and prob healthy, ring or colour marks read in field by ringer - nesting
A	alive and probably healthy - fate unknown
//	condition on finding wholly unknown
AC	alive and probably healthy - now captive

Plate 229. Crag Martin, Fair Isle, May 2018. © *Steve D Keightley*

Crag Martin, Fair Isle, 14–16 May 2018 – the first record for Fair Isle

K. PELLOW

My quest to add Calandra Lark to my British List (so far unsuccessfully) has seen me spend the last four springs on Fair Isle. This year, I returned on 12 May and with favourable weather forecast, was feeling quite optimistic. Overnight 13/14 May there was a period of rain with the resulting increase in migrants, obvious by the morning of the 14th. I decided to spend the whole day covering the island, being rewarded with several Bluethroats, a Red-backed Shrike and a 'Grey-headed Wagtail' amongst the more common species.

The weather had been glorious all day and following dinner, I just had to go out and enjoy what remained of the day. My options were an evening slog up to Ward Hill for a trip of Dotterel or a more-relaxed amble across to Buness. Having spent all day on my feet, the latter option seemed the obvious choice.

Before going onto Buness, I decided to check the cliff alongside the quay in North Haven. At 19:50 hrs I had almost reached the far end when I had very brief views of a brown martin make an abortive attempt to land on the cliff face and then disappear over the cliff top. From the views I had I was almost certain the bird had not been a Sand Martin, appearing to be larger and more compact, so waited expectantly for it to return.

There had been no sign of it returning, so after 15 minutes some doubt was creeping into my mind and I was considering that it might just have been a Sand Martin. Fortunately, there were a few *Phylloscopus* warblers on the cliff which kept me occupied, when at about 20:10 hrs I saw the martin returning along the cliff top. Almost immediately, I saw the white tail spots

and plain breast and shouted to a few other visitors from the Observatory who were in the area to "get on this bird - look at the tail spots!"

There were a few minutes of panic before I was able to contact anyone else from the Observatory, but that was achieved by just a short sprint back onto the road and everyone at the Obs was able to see the bird over the next 30 minutes before it again disappeared over the cliff top. It obviously went to roost as it was re-found the next day at Furse where it spent its time hawking over the beach, but regularly returned and perched on the nearby cliff face where it spent long periods preening.

The general impression of the bird was of a quite robust bird, larger and slightly paler than a Sand Martin. Its flight was slower and more graceful than accompanying Swallows. The uniform upperparts were dusky-brown with wings and tail appearing darker. The underparts were a paler buff-brown, being darker towards the undertail, and the underwing was pale brown but with black contrasting coverts. The breast was plain lacking any band. The tail had a row of four white spots on either side which were easily visible from below, but also showed from above when the tail was spread. When perched on the cliff face the wings appeared quite swift-like, being long and pointed and extending well beyond the tail.

The bird remained in Furse until it was last seen during the afternoon of 16 May.

The find showed just what a memorable place Fair Isle is and this was emphasised even more when a Song Sparrow was found the next morning by Assistant Warden Richard Cope during the early morning trap round!

The Crag Martin remained my highlight of this year, with the Calandra Lark continuing to evade me - but there is always next year!

Plates 230 a–b. Crag Martin, Fair Isle, May 2018. *© Roger Riddington*

Status of Crag Martin in Scotland

This species breeds in mountainous areas from the Iberian peninsula and NW Africa east through southern France, Italy, south and SE Europe, Turkey, the Caucasus and into southern Russia, south central Asia, the Himalayas and central China. European populations are resident or partially migratory, wintering in coastal Iberia, NW Africa and the northern Mediterranean coast and Turkey.

There have been 10 accepted records in Britain up to the end of 2017, all singles, with one of these in Scotland:

1988 Cornwall, Stithian's Reservoir, 22 June
1988 Sussex, Beachy Head, 9 July
1989 Gwynedd, Llanfairfechan, 3 September
1995 Sussex, Beachy Head, 8 October
1999 Leicestershire, Swithland Reservoir, 17 April, then same Yorkshire, Pugney's CP & Anglers' CP, 18 April
1999 Orkney, Davey's Brig, Finstown, Mainland, 3 May
2006 Surrey, Bagshot Lea, 22 October
2008 Sussex, Upper Beeding/Truleigh Hill, 21 September
2014 Yorkshire, Flamborough Head/Thornwick Bay 11–13 April
2015 Derbyshire, 1st-winter, Chesterfield, 8–19 November

The find dates for these birds group into three windows: 11 April to 3 May (3 birds), 22 June-29 July (2) and 3 September to 8 November (5), which may suggest they represent spring overshoots, dispersing post- or failed-breeders and autumn wanderers. Seven birds were only seen on the day of discovery, one on consecutive days at widely separate sites and the last two have lingered for three and 12 days respectively. As expected there is a southerly bias to records, with several inland. The Fair Isle bird is consistent with being a spring overshoot, though it extends that window by almost two weeks.

Reference

Williams, J. 1999. Crag Martin, Finstown, Orkney, 3rd May 1999 - a first for Scotland. *Birding Scotland* 2: 137–138.

Keith Pellow, Mount Pleasant Bungalow, Botus Fleming, Cornwall PL12 6NQ.
Email: keith.pellow1@btopenworld.com

Plate 231 a–c. Crag Martin, Fair Isle, May 2018. © (a & b) *David Parnaby,* (c) *Steve D Keightley*

Plate 232. Moltoni's Subalpine Warbler, John o' Groats, Caithness, 28 May 2018. © *Holly Peek*

Moltoni's Subalpine Warbler, Duncansby Head, John o' Groats, 28–30 May 2018 – the first record for Caithness

H. PEEK & K. GIBB

Serious birders be prepared to have your head in your hands for the majority of this story, as this little warbler wasn't found by skill (at least not on our part) but by pure chance.

I headed up to John o' Groats for the annual Orca Watch organized by Sea Watch Foundation. This brings 'orcaholics' from across the globe to search for Orcas (or Killer Whales) in the Pentland Firth. The end of May is one of the best times to see Orca from Duncansby Head, because they travel down from Shetland, Orkney and Iceland to feed on the blubber-rich seals that play on the shoreline.

On the Monday it was a gorgeous day so I, along with two of my good friends Andrew and Catherine decided to head up to the lighthouse to do a bit of Orca searching through the telescope. When we arrived, there were a few fellow 'orcaholics' already on the look out, however we noticed they were all facing north - towards Orkney. No one was looking south, "What if they come from the south? Then we will miss them!" exclaimed Andrew. So, we decided to head over to the back of the lighthouse and to do a spot of searching south. Andrew who had been to Orca Watch before, also wanted to show us the best places to position ourselves for when the Orca finally arrived. This was a great stretch to view the ocean from, it allowed us to get close up next to the cliff edge without having to scramble over fences and the ground was relatively even which made it easy to run along whilst having your face in a camera lens... something I would later be very grateful for.

On the walk along the cliff, we took in the views of the seabirds busy building nests, Puffins, Kittiwakes, Fulmars, Razorbills, Guillemots, Cormorants and skuas as far as the eyes could

see. There was one particular Puffin burrow that was very visible from the path so we decided to stop here for a while.

Andrew began to ask questions about the different bird species including "what's the difference between a Rock and Meadow Pipit?" Both species were showing off in the distance with their impressive songs and flying skills. Both Catherine and I tried to explain the difference but failed terribly, so we set Andrew the challenge of taking a photo of both a Rock and Meadow Pipit so we could then point out the differences. Shortly afterwards, Andrew pointed to a little brown bird perched on the wire fence "which one is that?" Catherine raised her binoculars to her eyes "That's a … erm … I don't know what that is". Catherine started to make a mental note of the features so we could look the bird up in our ID guides when we got back to the holiday cottage. Luckily, Andrew took a picture of the little bird as I didn't think this one would be in our bird guides.

We were baffled, the best we could come up with was a suggestion from Catherine - a juvenile Dartford Warbler. We weren't convinced it was but it was the best we could come up with and what we thought to be the most logical. We showed the pictures to fellow orcaholics David and Averil, as we knew they were keen birders. "There's a juvenile Dartford up there Averil … at least we think" I said. Averil and David gave me that look of 'yeah alright let's see this picture you've taken of a sparrow'. It was difficult to make out the picture because of the sunlight, but David seemed very keen to go and have a closer look, so we sent him in the general direction of where the little birdie was hanging out.

I sent a tweet and a couple of messages out with an 'off the back of the camera' picture asking people's opinions. Some agreed with us but then two tweets came in, one from Birdguides and one from a friend Alan Davies - Subalpine Warbler! I'd never heard of it. Birdguides were keen for more photos, so when we got back to the cottage I sent a few I had snapped. The identification soon changed again, this time to a Moltoni's Subalpine Warbler. This 'little rare budgie', as it was affectionately known by the 'orcaholics', had been promoted twice in the space of five hours - quite a day for the wee chappy.

The alert must have gone out to all the serious twitchers because over the next couple of days, people from all around travelled to John o' Groats to see our 'little rare budgie'. Those who came to see the warbler on the 30th had a real treat, not only had the warbler moved to the car park and was sitting on peoples' cars gorging on the squished dead bugs and generally showing off, but the Orcas appeared! A pod of five had travelled all the way down from Iceland to grace us with their presence. An incredible sight … still they have quite a bit of travelling to do to match the effort of our little Moltoni's Subalpine Warbler.

Holly Peek, Llangoed, Anglesey
Email: holly.peek.09@aberdeen.ac.uk

Plate 233. Moltoni's Subalpine Warbler, John o' Groats, Caithness, 30 May 2018. © *Mark Rayment*

The discovery of any Subalpine Warbler on the Scottish mainland is significant, but to add to the interest, some lovely images from Holly of this bird at Duncansby Head appeared online later that evening (28th), and those suggested the bird was most likely a Moltoni's Subalpine Warbler. The soft light salmon-pink underparts alone were highly suggestive of male Moltoni's, lacking the strength of colour found on both Subalpine Warbler subspecies which are a deeper red-orange. In Western, the underparts are extensively rusty-orange and in Eastern, the brick-red is more restricted to the throat and upper breast.

Plate 234. Moltoni's Subalpine Warbler, John o' Groats, Caithness, 29 May 2018. © *Kris Gibb*

Having not seen Moltoni's before, these early photos were enough to find Dennis Morrison and myself there early the next morning (29th). Our aim was to see the bird and confirm the identification beyond any doubt, hopefully by getting some good views and photographs, but equally important to hear and record the diagnostic Wren-like rattle call '*trrrrrr*' which differs from the broken-up, sharp 'tett' calls of Subalpine Warbler (both the Eastern and Western races).

Luckily, the bird was still present and found fairly quickly having relocated to a strip of nettles by the car park! At first it was looking very wet and inactive, which was a concern and didn't help with the identification, but it dried out and livened up as the morning went on. We enjoyed great views over the next few hours, at times as it hopped about the short grass just 10 ft or so away and amused us by disappearing under parked cars. The colouration of the underparts certainly seemed to be as the first photos suggested, so there was no doubt it looked like a Moltoni's. But what of the call? A couple of attempts at play-back were unsuccessful with no vocal response, although it did seem to ignore calls of 'Eastern' and 'Western Subalpine Warblers' and did react by flying in closer to Moltoni's recordings - a good sign but not exactly confirmation. However, whilst taking a short video of the bird, we noticed it dropping a 'poo' and after the bird had moved far enough away not to be disturbed, I collected it from the grass and sealed it in a plastic case to keep it safe. Better than a call? We'd need to wait and find out.

Next day, the faecal sample was sent to Martin Collinson at Aberdeen University who kindly agreed to have a DNA analysis carried out. On 20 June, I received this e-mail from Thom Shannon, a PhD student in Martin's lab:

"Hi Kris. Thanks for collecting and sending in the Moltoni's sample from Duncansby Head. Faecal samples can sometimes prove tricky to work with but this one was relatively trouble-free. We were able to obtain a short fragment of mitochondrial DNA, which did indeed confirm the bird to be a Moltoni's Warbler. Regards, Thom."

Despite being confident of the identification, it was good to have absolute piece of mind. Perhaps the photographs and descriptions would have been enough for acceptance from BBRC; non-calling Moltoni's have been given the thumbs up before. But it was great to be handed the final piece of the jigsaw in such a very modern way! Thanks to Thom and Martin for that, and of course to Holly and crew for their special find and generosity in sharing.

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Plate 235. Probable Black-headed Wagtail, St Kilda, Outer Hebrides, 1 June 2018. © *Ciaran Hatsell*

Probable Black-headed Wagtail, St Kilda, Outer Hebrides, 1 June 2018

C.R. HATSELL

St Kilda is a crazy place to bird. Most of the time, there are no migrant passerines present at all, aside from the few breeders, including the enigmatic St Kilda Wren. In the entire spring, a single Blackcap was the only *Sylvia* warbler and Snowy Owl was the most commonly encountered migrant! It can be tough to keep motivated but it's a case of just keeping going, getting your head down, getting three points for the team and being out and about as much as possible; my job as Seabird Ranger allows me to do just that.

I was carrying out an inland Fulmar survey in hazy conditions on 1 June 2018 and was reaching the helipad when the loud rasping call of a wagtail pierced the silence of the day. Immediately, thoughts sprang to Citrine Wagtail or an eastern type *flava*; the hoarse quality of the call was quite striking. The bird landed around 50 m away and through bins it was obviously a dark-capped *flava*-type wagtail. Getting a bit closer, I noted the very black-looking cap and the olive-toned mantle colour contrasting with the wings. The bird then took flight over towards the village and I lost it. This time the flight calls sounded a little sweeter and more western *flava*-like, with a single buzzing call in between.

I refound the bird pottering amongst the hooves of the Soay Sheep and got a few more record shots and listened for calls. It wasn't calling when feeding and remained quiet until it suddenly took flight and flew out of sight beyond the wall of the Head Dyke, calling once more two raspy, buzzing whip-cracking notes. It wasn't seen subsequently (it had presumably set off south!).

Most of the plumage features seemed to most closely match a *feldegg* [Black-headed]-type, but the variation and cline in the *flava* complex is well known.

Pro-*feldegg* features

- Very dark, black cap with forehead, crown, ear-coverts and nape all uniform, showing little contrast aside from small whitish specks
- Olive-green colour to the nape, contrasting with much darker wings/coverts
- Blackish wings with quite thick edges to tertials and coverts; deep black tail
- Only faintest hint of white moustachial markings
- Yellow chin and throat and bright yellow underparts
- Black-looking bill and legs
- Harsh, raspy buzzing flight call heard on three occasions

On 6 June, a similar-looking *feldegg*-type wagtail was sighted in Devon and RBA drew my attention to it by highlighting several features on the bird. Looking at the pictures, it seemed a sure-fire match to my bird on St Kilda just five days previously. The connection was apparently made by Brett Spencer and Chris Batty of RBA who made some comparative notes on the two birds.

Amongst the comparative features used were the moult limits in the greater coverts - it appeared to have replaced four in post-juvenile moult. In addition, the longest tertial was fresher and blacker than the other two, the small white markings behind the eye and the dark markings on the side of the throat also matched it beyond doubt.

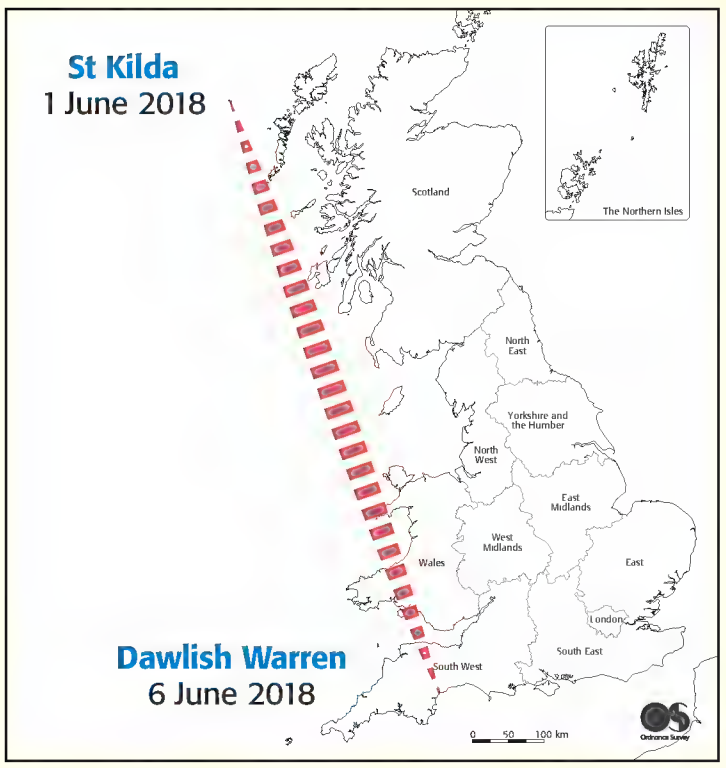

Figure 1. Map illustrating flight distance and time taken.

Plate 236. Probable Black-headed Wagtail, Dawlish Warren, Devon, 6 June 2018. © *Jo King*

If proven to be the same bird, it represents an incredible movement of 879 km in just five days - holy re-orientation batman! The fact that the bird was seen, heard and photographed so well in Devon means I will have to defer to those down there to give a more detailed description, given the briefness of the sighting here on St Kilda.

From the descriptions and discussion, it appears that during the time the bird spent in Devon, it failed to produce any sufficiently distinctive calls to match it to Black-headed Wagtail, giving sweeter more western Yellow Wagtail type calls.

To have an individual that appeared to tick all the boxes aside from some of the flight calls suggests a heavy influence of *feldegg* genes in this individual. Is the rasping call the only thing that makes a *feldegg* a 'true' *feldegg* and what level of variation is there within the calls of individuals? Where does it leave a bird that gives a combination of classic *feldegg* calls and more western Yellow Wagtail type calls?

Whatever the 'powers that be' settle on as a final identification, it was a stunning bird to stumble across and the story of its relocation is one that really highlights the brilliance of modern day photography and technology. *Flava* wagtails have been causing people to scratch their heads for years and I find it quite refreshing there are still things to learn and discover whilst out birding - something which keeps you going on those long days out in the field.

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Plate 237. Long-tailed Skua, Whalsay, Shetland, 10 July 2018. © *John Lowrie Irvine*

Long-tailed Skuas on Whalsay, Shetland, 7–10 July 2018

J.L. IRVINE

On the morning of 7 July 2018, I was out on Whalsay, Shetland with a couple of visiting birdwatchers. We had seen Whimbrel, Black Guillemot and Twite, plus Arctic Terns, Oystercatchers and Red-throated Divers - all with chicks. There was still over an hour to kill before my guests were off to watch the England vs. Sweden World Cup match.

Plate 238. Long-tailed Skua, Whalsay, Shetland, 9 July 2018. © *John Lowrie Irvine*

I was fast running out of ideas in a really quiet time of year when my mobile rang. Fellow island birder Brian Marshall had an adult Long-tailed Skua fly past him at Challister Ness (a headland on the west side of the isle). The skua then turned north-east towards the West Loch of Skaw. Since it is a species I still needed for my island list, I was relieved that it was still in that area in company with about ten local Arctic Skuas.

I was off the island later in the day but received a text from Brian to say it was hanging on with the Arctics and intriguingly, he had glimpsed a probable immature Long-tailed Skua but wasn't one hundred percent sure as it had been brief and distant. At about 14:00 hrs on 8 July, I could see two pale phase skuas on the hillside, north of the loch. Hoping to improve on the poor record shot from the first day, I crept up towards them. Both birds flew up with the Arctic Skuas and unbelievably both were adult Long-tailed Skuas! I

Plate 239 a–d (opposite). Dark morph adult Long-tailed Skua, Whalsay, Shetland, 9 July 2018. © *John Lowrie Irvine*

a)

b)

c)

d)

Plate 240. Pale and dark morph adult Long-tailed Skuas, Whalsay, Shetland, 9 July 2018. © *John Lowrie Irvine*

put it out on our local 'whatsapp' group and was soon joined by Jon Dunn. Next up was Brian's pale immature bird, it circled overhead showing off its heavily barred rump and even began mock diving on my head a couple of times! As I have never seen Long-tailed Skua in my 53 years on Whalsay, three birds flying around at one time was a lot to take in, but things were about to get even more surreal. I spotted a small dark morph skua with a really long tail approaching. With three other Long-tailed Skuas overhead, as well as half a dozen Arctics, it was obviously the same size and shape as the former species. Neither myself or Jon knew of the existence of a dark morph Long-tailed Skua so I rang Brian. He said that there were records of this but it is "incredibly rare". A bit of internet research later in the day seemed to imply that even this was an understatement. Photographing a dark bird against the sky proved a bit of a challenge but eventually I got two or three reasonable shots, hopefully proving this occurrence beyond any doubt. A few of the mainland Shetland birders came in for a look on 9 July when a dark immature bird was also found, bringing the final total up to an amazing five individuals (three adults and two immatures).

The sight of five Long-tailed Skuas, not to mention the added excitement of the dark bird, hovering around the moorland on my home island will live long in the memory.

The birds were last seen on 10 July, when Unst birder Dave Cooper managed to get photos of a sixth individual which he considered a third-summer bird.

John Lowrie Irvine, Whalsay, Shetland.
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Klaus Malling Olsen comments:

"The Whalsay bird indeed looks to be what could be called a dark morph adult, showing a tail length that is within the range of adults, albeit at the shorter end of the range. Also, the all-dark underwing coverts lead to this conclusion. Regarding how rare such adults are, they may alternatively be regarded as melanistic individuals rather than a morph. The Whalsay bird is indeed the first photo-documented live bird, and all claimed 'dark morphs' in skin collections have proved to show at least a few barred, immature underwing coverts, as do the two mentioned by Boertmann (1994) [from western Greenland which are now in the collection at the Zoological Museum in Copenhagen].

Note, however, that among juveniles, up to 30% could be regarded as dark types, the extremes among these even showing all dark, unbarred underwing coverts. One wonders how such birds develop into adult plumage, but the norm - based on a large number of birds - is that the older they get, the paler they get. A genuine adult dark 'morph' is still extreme and a dream bird among skua enthusiasts. I really want to see such a bird myself!"

Reference

Boertmann, D. 1994. *An Annotated Checklist to the Birds of Greenland*. Meddelelser om Grønland Bioscience 38.

Scottish Bird Sightings

1 April to 30 June 2018

S.L. RIVERS

Records in Scottish Bird Sightings are published for interest only. All records are subject to acceptance by the relevant records committee.

The following abbreviations for recording areas are used: Angus & Dundee - A&D; Argyll - Arg; Ayrshire - Ayrs; Borders - Bord; Caithness - Caith; Dumfries & Galloway D&G; Highland - High; Lothian - Loth; Moray & Nairn - M&N; North-East Scotland - NES; Outer Hebrides - OH; Perth & Kinross - P&K; Shetland - Shet; Upper Forth - UF.

The species order is that of the IOC World Birdlist as adopted by BOU on 1 January 2018.

A long spell of mostly dry and hot weather from April into July brought the warmest spring/summer for many years, and a number of overshooting vagrants were found. Numbers of White-billed Divers seen increased for yet another spring, while an influx of Rose-coloured Starlings in June was the biggest since 2002.

Cackling Goose (form *hutchinsii*): one was still at Baleshare, North Uist (OH) to 12 April, and one was at Ruaig, Tiree (Arg) on 5 April. **Snow Goose:** two white-phase birds were at Scrabster (Caith) on 10 April; one at Borve, North Uist (OH) on 11 April, and one at Grutness, Mainland (Shet) on 12-20 June. **Ross's Goose:** two were at Keiss and then Loch of Mey (both Caith) on 3 May. **Taiga Bean Goose:** singles were noted at Bullers of Buchan (NES) on 12 April and Skinflats Lagoons RSPB Reserve (UF) on 13 April. **Tundra Bean Goose:** one was still at Letham Pools, Collessie (Fife) to 7 April. **Bewick's Swan:** singles were at Loch of Hillwell, Mainland (Shet) on 5-9 April; at Scatness, Mainland (Shet) on 5-6 April; at Loch of Spiggie, Mainland (Shet) on 10-13 April, and Boddam, Mainland (Shet) on 14 April.

Blue-winged Teal: a first-winter male was at Loch Stiapabhat, Lewis (OH) on 18-19 April. **American Wigeon:** single drakes were at Loch of Spiggie, Mainland (Shet) on 17-24 April; at Loch Watten (Caith) on 19 April; at Garth's Loch, Scatness, Mainland (Shet) on 25 April, with presumed same at Toab, Mainland (Shet) on 28 April; two (one drake) were near Loch Ardvule, South Uist (OH) on 23 May, and one at Loch of Tankerness, Mainland (Ork) on 9 June. **Black Duck:** the returning male was at Strontian (High) throughout. **Green-winged Teal:** the drake remained at Balranald, North Uist (OH) to 13 April; with singles at Ham (Caith) on 4 April; at Loch Gruinart RSPB Reserve, Islay (Arg) on 11-16 April; at Aberlady Bay (Loth) on 14-17 April; at Oronsay (Arg) on 28 April; at Loch of Loch of Strathbeg RSPB Reserve (NES) on 1-10 May; at Ardskenish, Colonsay (Arg) on 6 May and East Loch Fada, Colonsay on 7th; at Balnakeil (High) on 7-8 May; at Loch of Hillwell, Mainland (Shet) on 11-12 May; two were at Balranald on 11th; one at Loch Sandary, North Uist (OH) on 11th; one at Ham Burn, Foula (Shet) on 13th, and one again at Loch Gruinart on 19-31 May.

Ring-necked Duck: a drake was still at Blackford Pond/Lochend Pond/Duddingston Loch/ Holyrood Park, all Edinburgh (Loth) to 21 April; one still at Coot Loch, Benbecula (OH) to 19 April; two were at Keose, near

Plate 241. Ring-necked Duck, Blackford Pond, Lothian, 1 April 2018. © *Rob Parsons*

Stornoway, Lewis (OH) on 12 April; one at Loch Finlaggan, Islay (Arg) on 6 May to 26 June; one at Meikle Loch (NES) on 10-12 May; one near Eochar, South Uist (OH) on 14-25 May, and one at Caerlaverock WWT Reserve (D&G) on 4-5 June. **Lesser Scaup:** a drake was at Alturlie Point, near Inverness (High) on 18-21 April, and at Devenmouth Pool, Cambus (UF) on 9 May. **King Eider:** a drake was in Tresta Voe, Mainland (Shet) on 9 April, and the returning drake was on the Ythan Estuary (NES) from 23 April to 19 June. **Surf Scoter:** the adult drake was still off Musselburgh/ Fisherrow (Loth) to 3 June; one off Ruddon's Point (Fife) on 1-11 April; two were off Gullane (Loth) on 5-6 April; one off Uyeasound, Unst (Shet) on 12 April; a drake was off Portmahomack (High) on 7-8 May; a drake off Port Seton (Loth) on 12 May; a female off Blackdog/Murcar (NES) on 15 May, and a female off Portobello (Loth) on 18 June. **American White-winged Scoter:** the drake remained off Musselburgh/ Fisherrow (Loth) until at least 12 May. **Smew:** a drake was at Lamington (Clyde) on 6-7 April, and a female was at Loch Skene (NES) on 1-2 June. **Hooded Merganser:** the adult drake was still on Hirta, St. Kilda (OH) to 13 April.

White-billed Diver: one was still off Eoligarry Jetty, Barra (OH) to 10 May; at least six were off Portsoy (NES) on 1 April, with 13 on 7th, 24 on 8th, one on 14th, nine on 18th, 14 on 19th, two on 22nd, five on 23rd, three on 25th, two on 26-29th, and one on 30 April to 3 May, five on 4 May, and one to 16 May ; one off Cullen (NES) on 1 April, with two there on 9th, five on 15th, two on 18th, and four on 22nd; one was off Gloup Ness, Yell (Shet) on 1st; one in Bluemull Sound, off Yell (Shet) on 7th; one between Cava and Hoy (Ork) on 8th; two off Portknockie (M&N) on 8-9th; one off Lossiemouth (M&N) on 9th and 20 April to 13 May; four off Port Nis, Lewis (OH) on 14th; and 32+ were seen on a pelagic trip off Buckie (M&N) on 16 April – a record Scottish count. One was off Burghead (M&N) on 19-25 April; one was in South Nesting Bay, Mainland (Shet) on 20th; 14 off Buckie on 28th; one off Wood Wick, Unst (Shet) on 30 April; one off North Ronaldsay (Ork) on 30 April to 7 May; one off Hoxa, South Ronaldsay (Ork) on 7 May; five off Buckie/Portsoy on 12 May; singles were off Cullen on 12th; off Port Nis on 17th; off Talmine, near Tongue (High) on 19 May; off Ardvule, South Uist (OH) on 21st; off Tarbat Ness (High) on 22nd, and off North Ronaldsay on 29 May. One flew past Loch Ordais, Bragar, Lewis (OH) on 4 June; one was off Quinish Point, Mull (Arg) on 5 June, and one between Westray/Papa Westray (Ork) on 19 June.

Pied-billed Grebe: the long-stayer at Loch Feorlin, near Lochgilphead (Arg) was present throughout, and the bird at Loch of Spiggie, Mainland (Shet) remained to 17 April. **Glossy Ibis:** one was still at Kilmoluaig, Tiree to 19 April; one at Skinflats Lagoons RSPB Reserve (UF) on 9 April, and one at Loch of Strathbeg RSPB Reserve (NES) on 28 May. **Great White Egret:** singles were at Loch of Strathbeg RSPB Reserve (NES) on 8 April to 8 May; at Burrafirth, Unst (Shet) on 17 April; at Loch of Dervaig, Mull (Arg) on 12 May; at Funzie, Fetlar (Shet) on 13 May, and on North Ronaldsay (Ork) on 18-21 May. **Spoonbill:** one flew over Beith (Ayrs) on 11 April; an adult over Lochwinnoch RSPB Reserve (Clyde) on 11 April; an adult was at Loch of Strathbeg RSPB Reserve/Ythan Estuary (NES) from 12 April, with two there on 30th and three from 1-4 May and one still to 14 May; one was at Montrose Basin (A&D) on 9 May; one flew over Dunbar (Loth) on 22 May; one was at Grahamston Loch, near Windwick, South Ronaldsay (Ork) on 25-27 May; one flew south over Duncansby Head (Caith) on 27 May; one was at Loch of Wester (Caith) on 27 May, with two on 29-30 May; one at Loch Scarmclate (Caith) on 30 May; one flew over the Eden Estuary (Fife) on 17 June, and two were at Loch of Mey (Caith) from about 22 June into July.

Black Kite: the juvenile [probably an eastern form intergrade 'Eastern Black Kite'] roosted regularly at Langskaill Plantation, Tankerness, Mainland (Ork) to 5 May, then visited Gloup, Yell (Shet) on 24 May, North Ronaldsay (Ork) on 7 June, and Fair Isle on 7-12 June. **Montagu's Harrier:** a female was at Strath Farm, near Stewarton (Arg) on 12 May. **Spotted Crake:** one was at Iochar, South Uist (OH) on 13 May. **Common Crane:** one was still at Deerness, Mainland (Ork) on 1 April, with two reported there on 25 April; one was at Drumoak (NES) on 4-10 April; three flew over Edinburgh Royal Infirmary, Edinburgh (Loth) on 6 April; one at Loch of Swannay, Mainland (Ork) on 7th; six at Craigforth, near Stirling (UF) on 7th; two at Dowlaw (Bord) on 8th; two at Loch of Strathbeg RSPB Reserve (NES) on 8th; one was on Unst (Shet) on 20-23rd; four were present at Loch of Strathbeg RSPB Reserve from 23 April into July, venturing to Cruden Bay, Rattray, Sands of Forvie and the Ythan Estuary (all NES), with six at Strathbeg from 12 May and five on 27 May, five were at Rattray on 13th and 18th, and five on the Ythan on 24th. One was at Birsay, Mainland (Ork) on 7 May; one on North Ronaldsay (Ork) on 8 May; one near Banff (NES) on 8 May; one at Loch of Hillwell/Quendale, Mainland (Shet) on 11-14 May, and one near Thurso (Caith) on 29 May.

Plate 242. Avocets, Powfoulid, Upper Forth, 29 April 2018. © *Ron Penn*

Stone Curlew: one was at Balnakiel (High) on 15 May. **Avocet**: three were at Loch of Strathbeg RSPB Reserve (NES) on 16 April; three at Guardbridge (Fife) on 19 April, and two at Rigifa Pools, Cove (NES) on 9 June. **American Golden Plover:** one was at Skaw, Unst (Shet) on 29 May. **Killdeer:** one was at South Ness, Foula (Shet) on 25 April. **Temminck's Stint:** singles were on Sanday (Ork) on 10 May; at Loch of Strathbeg RSPB Reserve (NES) on 16 May; on Folly Pond, Caerlaverock WWT Reserve (D&G) on 19 May; at Freswick Bay, near Skirza (Caith) on 21 May; at Killin (UF) on 25 May; at Balnakeil (High) on 30 May, and near Westing, Unst (Shet) on 31 May. **Pectoral Sandpiper:** singles were at Ardnave Point, Islay (Arg) on 4 May; at Loch of Strathbeg RSPB Reserve (NES) on 22-23 May; at Shoadals, Foula (Shet) on 26th; at Marwick, Mainland (Ork) on 27 May, and on Papa Westray (Ork) on 17 June. **Semipalmated Sandpiper:** an adult was at Balranald RSPB Reserve, North Uist (OH) on 12-15 May, and one at Bragar, Lewis (OH) on 24-25 May. **Long-billed Dowitcher:** one was at Loch Smerclate, South Uist (OH) on 21-22 May. **Terek Sandpiper:** one was at Pool of Virkie, Mainland (Shet) on 15 May. **Lesser Yellowlegs:** one was at Caolais, Vatersay (OH) on 9-15 May, and at Loch Bhrusda, Berneray (OH) on 16-17 May.

Bonaparte's Gull: a first-summer was at Heylipol/Loch a' Phuill, Tiree (Arg) on 31 May to 1 June. **Mediterranean Gull:** very few reports away from the Firth of Forth, but singles at Machrihanish, Kintyre (Arg) on 22 May and 1 June were notable. **Ring-billed Gull:** an adult was on Fair Isle on 8 April; a first-summer at Ullapool (High) on 30 April; an adult on Hirta, St Kilda (OH) on 21-25 May; a first-summer at Grutness, Mainland (Shet) on 26-31 May, and Loch of Hillwell, Mainland on 4-16 June. **Glaucous Gull:** large numbers, mostly in the Northern and Western Isles, though recorded south to Troon (Ayrs) and Peterhead (NES). About 120 noted in April, mostly singles, but with peak counts of 13 at Rubha Arnal, North Uist (OH) on 1st, with ten still there on 8th and four at Marwick Bay, Mainland (Ork) on 29th. Over 40 reported in May, mostly singles but with two at Marwick on many dates and at six other sites. About 15 in June, mostly singles but with a high count of three at Marwick Bay on 2nd. **Iceland Gull:** good numbers still, mostly in the Northern and Western Isles, but seen as far south as Carsethorn (D&G) and Skateraw (Loth). About 170 in April, mainly singles, but higher counts of 26 at Rubha Arnal, North Uist (OH) on 8th, with 17 there on 1st, and 19 at Stornoway, Lewis (OH) on 4th. Over 65 in May, mostly singles, but a peak count of three at Yesnaby, Mainland (Ork) on 6th. About 20 in June, all singles except for two at Ardvule, South Uist (OH) on 16th. **Kumlien's Gull:** a second-winter was still at Ardvule, South Uist (OH) to 9 May, with it or another at Loch Bornish, South Uist on 8-9 May, and a juvenile was still on North Ronaldsay (Ork) to 19 May. **Caspian Gull:** a first-winter was at Leven (Fife) on 11-13 May. **Yellow-legged Gull:** an adult was at Blythswood Square, Glasgow (Clyde) on 7-8 April, and at Osborne Street, Glasgow on 14 April; an adult was at Thurso (Caith) on 15 April, and a first-summer was at Loch Gilphead (Arg) on 17 May.

Roseate Tern: two were on the Isle of May on 10 June, and one on 21 June; one at the Ythan Estuary (NES) on 13 June, and one at Leith Docks (Loth) on 24 June. **Black Tern:** one was at St John's Pools (Caith) on 4 June, and one at Loch na Keal, Mull (Arg) on 14 June. **Pomarine Skua:** passage started with one off Neist Point, Skye (High) on 12 April; one off Losiemouth (M&N) on 20 April, and three past Balranald RSPB Reserve, North Uist on 26 April. About 450 noted during May, with higher counts of 101 off Balranald on 2nd, and 132 there on 3rd. Late stragglers included one off Lagavulin, Islay (Arg) and one past North Ronaldsay (Ork) on 12 June; one past Troon (Ayrs) on 14th, and one near Fair Isle on 30 June. **Long-tailed Skua:**

passage was notably light - two were off Balranald RSPB Reserve, North Uist (OH) on 3 May, followed by 55 past there on 9 May and 16 on 10th; one passed Sumburgh Head, Mainland (Shet) on 12th; 17 passed Balranald on 15th, seven on 18th, one passed Ardvule, South Uist (OH) on 21st; four off Waternish Point, Skye (High) on 25 May; one near Tomintoul, Cairngorms NP (M&N) on 3 June; one at Lochindorb (High) on 3-4 June; one off Canna (High) on 24th, and one over Fair Isle on 25 June.

European Turtle Dove: singles were at Halligarth, Unst (Shet) on 13 May, at Barvas, Lewis (OH) on 16 May; on St. Kilda (OH) on 18-19th; near Culla Bay, Benbecula (OH) on 20-23 May, and at Tolsta Chaolais, Lewis (OH) on 29 June. **Scops Owl:** one was calling near Portsoy (NES) in late May/early June. **Snowy Owl:** the usual bird was on Sanday (Ork) on 23 April; one at Birsay Moors, Mainland (Ork) on 27 April; one on St. Kilda (OH) from 29 April into July; one at Hermaness, Unst (Shet) on 6 May; one at Bigton, Mainland (Shet) on 5 June, and one on Stronsay (Ork) on 23 June. **European Bee-eater:** singles flew over Aberfoyle (UF) on 11 May; over Sandwick, Mainland (Shet) on 15 May; over Rusness, Sanday (Ork) on 28 May; presumed same on North Ronaldsay (Ork) on 28-30 May; five were near Haugh Garden, Roseisle (M&N) on 28 May, and one at Lybster (Caith) on 30 May. **Hoopoe:** singles were at near Melgarve/Spean Bridge (High) on 14 April; near Boyndlie/New Aberdour (NES) on 19 April; on Foula (Shet) on 26 April; at Culkein Drumbeg (High) on 6 May and at Tighnabruaich, Cowal (Arg) on 29 May. **Wryneck:** one was at Avelochan (High) on 6 June. **Hobby:** singles were at Loch Insh (High) on 7 May; at Balnakeil (High) on 11 May; at Dornoch (High) on 12th; on Fair Isle on 31 May and 17 June, and at Glenmore Forest Park, Aviemore (High) on 12 June.

Red-backed Shrike: about 45 in May from first at Bakkasetter, Mainland (Shet) on 12th, mostly singles on the Northern Isles, with highest count of eight on Fair Isle on 28th. Elsewhere a male was at Hopeman (M&N) on 25 May; a female at Skateraw (Loth) on 27 May; a female at Balcomie, Fife Ness (Fife) on 27-29th; a female on the Isle of May on 27-28th, and a male at Kilminning, Fife Ness on 29 May. At least 15 in June, all on the Northern Isles except for one at Rattray Head (NES) on 3rd, and all singles except for two on Fair Isle on 2nd. **Great Grey Shrike:** singles were at Penwhim, near Cairnryan (D&G) on 11 April; at St. Abb's Head (Bord) on 14-15 April; at Burwick, South Ronaldsay (Ork) on 17th, and at Baelans, Fetlar (Shet) on 18 April. **Woodchat Shrike:** a male was at Baltasound, Unst (Shet) on 17 April (died later that day). **Golden Oriole:** a male was at Levenwick, Mainland (Shet) on 23 May; one at Marwick, Mainland (Ork) on 26 May; a male at Tresta, Mainland (Shet) on 31 May; one was at Bigton, Mainland (Shet) on 2 June; a male at Voe, Mainland (Shet) and one near Kirkwall, Mainland (Ork) on 3 June; one at Feal Plantation, Fetlar (Shet) from 3-12th; a male at Berriedale Plantation, Hoy (Ork) on 7th; one at Houbie, Fetlar on 26th, and then nearby at Tresta, Fetlar on 28 June. **Waxwing:** few remained from winter, with six at Banchory (NES) on 5 April; one in Lerwick, Mainland (Shet) on 19-14 April; 20 still in Inverness on 14 April, and one at Dounby, Mainland (Ork) on 26-30 April. **Woodlark:** one was on North Ronaldsay (Ork) on 3 April. **Shore Lark:** one was at Sumburgh, Mainland (Shet) on 28 April. **Short-toed Lark:** one was on the Isle of May on 26 May to 1 June. **Crag Martin:** one was at Furse, Fair Isle on 14-16 May - the second Scottish record. **Red-rumped Swallow:** one was at Ham, Foula (Shet) on 1 May; one on Fair Isle on 3-4 May; one at Armadale (High) on 24 May, and one was seen from a ship c30 miles east of Stronsay (Ork) on 26 May.

Greenish Warbler: singles were on Out Skerries (Shet) on 27 May; on the Isle of May on 27-28 May; at Scatness, Mainland (Shet) on 31 May; at Rattray Head (NES) on 31 May to 1 June, and at Torry Battery, Aberdeen (NES) on 2 June. **Great Reed Warbler:** one was at Halligarth, Unst (Shet) on 1 June. **Paddyfield Warbler:** one was at Scatness, Mainland (Shet) on 28 May. **Blyth's Reed Warbler:** one was at Ackrigarth, Lerwick, Mainland (Shet) on 17 May, and one on Fair Isle on 27 May. **Marsh Warbler:** about 18 on Shetland from 12 May, and up to 10 on Fair Isle from 19th, including seven on 31st. Elsewhere singles were at Fife Ness (Fife) on 12 May; St. John's Loch (Caith) on 17-25th and 29-30 May; at Wick (Caith) and on North Ronaldsay (Ork) on 25th; on the Isle of May on 26th; and three on North Ronaldsay on 30 May, with one still on 31st. In June about 10 were on Shetland, and up to 12 on Fair Isle including four on 1st and 11th. Elsewhere there were two on North Ronaldsay on 1st, with one there on 8th; three near Wick (Caith) on 2nd, and one at Balephuil, Tiree (Arg) and two at Skirza (Caith) on 3rd. **Icterine Warbler:** In May there were five on Shetland, about 10 on Fair Isle, including six on 31st, one on Sanday (Ork) on 31st, and one on the Isle of May on 26-30th, with two on 27-29th. Birds were seen until about 10 June with four on Shetland, up to three on Fair Isle, one at Creachan, Barra (OH) and one on Sanday (Ork) on 1st, and one at Nigg (High) on about 10-11th. **River**

Warbler: one was at Skirza (Caith) on 3 June. **Marmora's Warbler:** one was at Baliasta, Unst (Shet) on 14 May – the second Scottish record. **Subalpine Warbler:** a female was on Fair Isle on 22 May, and one (probably Eastern) was at Cornaigbeg, Tiree (Arg) on 9 June. Birds ascribed to race - **Eastern Subalpine Warbler**: a male was at Breckins, Foula (Shet) on 17 May, and a female on Fair Isle from 1 June into July. **Moltoni's Subalpine Warbler:** a male was at Duncansby Head (Caith) on 28-30 May. **Firecrest:** one was still on Iona (Arg) on 11 April; one at Castlesea Bay, Auchmithie (A&D) on 12-14 April; two at the Royal Botanic Gardens, Edinburgh (Loth) on 20 April and one on Foula (Shet) on 22 April.

Rose-coloured Starling: following an influx of hundreds of adults into central Europe, the first arrival in Scotland was at Geary, Skye (High) on 22 May, with seven further birds in May and over 40 reported in June. Most were singles, but higher counts included two on Fair Isle on 2 June, with three on 4th; two at the Spey Estuary near Tugnet (M&N) on 7 June, and two at Bullers of Buchan/Cruden Bay (NES) from 22 June. Good numbers were widespread in the north and west into July. **Bluethroat:** a female was at Grutness, Mainland (Shet) on 9 May; one on North Ronaldsay (Ork) on 10 May, with two on 13th, one on 14th, and one on 23-25th; one on Sanday (Ork) on 12 May; a female at Scatness, Mainland (Shet) on 13th; two on Foula (Shet) on 13th; two at Quendale, Mainland (Shet) on 13th; eight on Fair Isle on 13th, with six on 14th, and four on 15th; one at Skaw, Whalsay (Shet) on 14th; one at Tresta, Fetlar (Shet) on 16th; further singles on Fair Isle on 20th and 22 May, with two on 28th and 30 May, three on 31st, and still on 1 June, and one at Wick (Caith) on 25 May. **Thrush Nightingale:** singles were on the Isle of May on 4th and 31 May to 1 June; on Fair Isle on 30 May, with two on 31st, and one still on 1 June, and one on Out Skerries (Shet) on 30 May. **Common Nightingale:** one was at Burns, Foula (Shet) on 24 April; one at Garynahine, Lewis (OH) on 15 May; one at Funzie, Fetlar (Shet) on 16 May; one on North Ronaldsay (Ork) on 16-17 May, and one at Walls, Mainland (Shet) on 1 June. **Collared Flycatcher**: a male was at Camster, near Watten (Caith) on 9 May. **Red-breasted Flycatcher:** a female was at Sumburgh Head, Mainland (Shet) on 14 May; one on Fair Isle on 18-20 May; one on the Isle of May on 23-25th; on North Ronaldsay (Ork) on 25th; at Scatness, Mainland (Shet) on 28th; a male at Voe, Mainland

Plate 243. Rose-coloured Starling, Scatness, South Mainland, Shetland, 10 June 2018. © *Roger Riddington*

(Shet) on 30th; one at Vidlin, Mainland (Shet) on 30th; at Baltasound, Unst (Shet) on 31 May; at Pool of Virkie, Mainland (Shet) on 1 June, and one on North Ronaldsay on 16 June.

Yellow Wagtail: one was near Crail (Fife) on 19 April; a male was at Neist Point, Isle of Skye (High) on 2-3 May; one at West Freugh Airfield (D&G) on 5 May; one on Vatersay (OH) on 12 May, and one at Ardivachar Point, South Uist (OH) on 7 June. **Blue-headed Wagtail:** a male was on North Ronaldsay (Ork) on 15 April; one at Barns Ness (Loth) on 17 April, with two on 18-21, and one still on 22nd; singles on Fair Isle on 24 April and 5-6th and 31 May, and Loch of Spiggie, Mainland (Shet) on 12 May. **Grey-headed Wagtail:** a male was on North Ronaldsay (Ork) on 28 April; one at Musselburgh Lagoons (Loth) on 7-10 May and on 24 May; on Out Skerries (Shet) on 30 May; on North Ronaldsay on 30 May; on Fair Isle on 1 June, and at Doonfoot (Ayrs) on 9 June. A first-summer male Grey-headed or Black-headed Wagtail was on the Isle of Noss (Shet) on 10-11 May. **Black-headed Wagtail:** one was on St. Kilda (OH) on 1 June. **Red-throated Pipit:** one was at Mull Head, Papa Westray (Ork) on 27 May. **Water Pipit:** one was still at Skateraw (Loth) to 1 April.

Hawfinch: the numbers from the influx in autumn 2017 began to decline, with just over 100 seen in April, including higher counts of six at Duns (Bord) on 3rd; five at Penicuik (Loth) on 7th; six at Baltasound, Unst (Shet) on 15th, and five at Loch of Hillwell, Mainland (Shet) on 17th. Fourteen reported in May, all singles except for two at Balephuil, Tiree (Arg) on 13-14th. Four were reported in June – one at Mid Yell, Yell (Shet) on 1st; one on North Ronaldsay (Ork) on 2-4th, and two at Carluke (Clyde) on 17th.

'Northern' Bullfinch: a female was at Collafirth, Mainland (Shet) on 14 April. **Common Rosefinch:** singles were on Papa Westray (Ork) on 18 May; on North Ronaldsay (Ork) on 21-22nd and 25 May; on Fair Isle on 26 May, with three there on 27th, and two still on 28th; one at Gloup, Yell (Shet) on 27th; one at Balephuil, Tiree (Arg) on 28th; one at Brevig, Barra (OH) on 2 June, and one on Vatersay (OH) on 9 June. **Arctic Redpoll:** a bird not assigned to race was at Dalnabreck, near Loch Shiel (High) on 23 April. **Serin:** one was on Fair Isle on 16 June.

Ortolan Bunting: one was at Mucklegrind, Foula (Shet) on 16 May, and one at Norwick, Unst (Shet) on 31 May. **Cirl Bunting:** a male was at Carradale, near Campbeltown on 11 April. **Little Bunting:** one was at Linsiader, near Stornoway, Lewis (OH) on 9-10 April. **Rustic Bunting:** one was at Diabaig, near Gairloch (High) on 9 April, and one on the Isle of Noss (Shet) on 20 May. **Black-headed Bunting**: a male was at Brims, near Thurso (Caith) on 17-18 June, and at Norwick, Unst (Shet) on 20-21st and 26-30 June. **Black-faced Bunting:** one was near Norwick, Unst (Shet) on 14 May. **Song Sparrow:** one was on Fair Isle on 15-18 May. **Lapland Bunting:** a male was at Gloup, Yell (Shet) on 1-8 April, with presumed same at Breckon, Yell on 9th; one on North Ronaldsay (Ork) on 4th and 9 April; six at Balranald RSPB Reserve, North Uist (OH) on 5 April, with one still on 7th; a male at Loch Stiapabhat, Lewis (OH) on 7-11th; three at Sollas, North Uist on 10th; one flew over Balranald on 11th; two were at Glenmore, Mull (Arg) on 11th; singles on the Isle of May and Fair Isle on 15th; at Sorobaidh Bay, Tiree (Arg) on 17th; at Culla Bay, Benbecula (OH) on 18th; on North Ronaldsay on 19th; a male at Barns Ness (Loth) on 22nd; at Huxter, Mainland (Shet) on 27th; at Advergnish, Mull on 28th; two at Scatness, Mainland (Shet) on 30 April and 5 May; one on North Ronaldsay on 2 May; one at Loch of Spiggie, Mainland (Shet) on 13 May, and one at Mullach Sgar, St. Kilda (OH) on 20 June. **Snow Bunting:** numbers started to subside rapidly after the winter peak, still mostly on the Northern and Western Isles, but noted as far south as Argyll and Lothian. Singles were at Musselburgh Lagoons (Loth) on 1 April; on Fair Isle on 1 April; at Grutness, Mainland (Shet) and Norwick, Unst (Shet) on 2nd; three on North Ronaldsay (Ork) on 2nd; four at Baltasound, Unst on 3rd; one at Westing, Unst on 4th; four on Ben Nevis (High) on 5th; two on Fair Isle on 6th, one on 7th, two on 9th and three on 10th; two at Aberlady Bay (Loth) on 7th, and one on 8th; one on North Ronaldsay on 13th, two on 15th, and one to 19th; singles on the Isle of May on 15th; at Ardvule, South Uist (OH) on 19th; on Fair Isle on 21st; at Traigh Mhor, Barra (OH) on 26-28 April; at Traigh Bhagh, Tiree (Arg) on 4 May; at Spey Bay (M&N) on 7 May and at Stinky Bay, Benbecula (OH) on 10 May.

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PhotoSPOT

Plate 244. Do you ever get that feeling, like the pantomime hero, that there's something "behind you"? So, it was when I was walking along the causeway between two small, reed-fringed lochs at Trabboch in South Ayrshire on 13 May 2018. A few pairs of Water Rails breed each year at this location, although they are normally fairly secretive and hard to see, let alone try to get an opportunistic photograph. For some unknown reason I turned around to see a Water Rail walk in an uncharacteristically confident manner out from the roadside verge and on to the tarmac.

As I raised the camera very slowly towards my face, the bird stopped in the middle of the narrow road - this was that comical moment when you just know that it realised it had made a major blunder! Usain Bolt could not have caught it at that point, as it took to its heels and sprinted for cover (how can a bird with such big feet run so fast?). I managed to take about four or five shots before it disappeared into the grass, but you're always left wondering whether you managed to get anything in that briefest of episodes.

I guess luck was on my side that particular day, though I'm not sure that this kind of event is likely to repeat itself in the near future?

Equipment: Nikon D7100, Nikkor 80-400 f4.5 lens with 1.3x crop filter applied, Aperture Priority, ISO 800, shutter 1/1600, aperture f8.

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